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TFT LCD Evaluation Specification

MODEL NO.: V260B1 – L01

1. GENERAL SPECIFICATIONS

1.1 GENERAL

Item	Specification	Unit	Note
Active Area	575.77 (H) x 323.71 (V) (26" diagonal)	mm	
Bezel Opening Area	580.8 (H) x 328.8 (V)	mm	
Driver Element	a-si TFT active matrix	-	
Pixel Number	1366 x R.G.B. x 768	pixel	
Pixel Pitch (Sub Pixel)	0.1405 (H) x 0.4215 (V)	mm	
Pixel Arrangement	RGB vertical stripe	-	
Display Colors	16.2M	color	
Display Operation Mode	Transmissive mode / Normally White	-	
Surface Treatment	Anti-glare coating	-	

1.2 MECHANICAL

Item	Min.	Typ.	Max.	Unit	Note
Module Size	Horizontal(H)	626		mm	
	Vertical(V)	373		mm	
	Depth(D)	TBD		mm	To PCB cover
	Depth(D)	(40.7)		mm	To inverter cover
Weight		TBD		g	

2. ABSOLUTE MAXIMUM RATINGS

2.1 TFT LCD MODULE

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	V _{CC}	-0.3	6.0	V	
Input Signal Voltage	V _N	-0.3	3.6	V	

2.2 BACKLIGHT UNIT

Item	Symbol	Test Condition	Min.	Type	Max.	Unit	Note
Lamp Voltage	V _W	Ta = 25	-	-	3000	V _{RMS}	
Inverter Input Voltage	V _{BL}	-	0	-	30	V	
Control Signal Level	-	-	-0.3	-	7	V	

3. ELECTRICAL CHARACTERISTICS

3.1 TFT LCD MODULE

 $T_a = 25 \pm 2 \text{ }^\circ\text{C}$

Parameter	Symbol	Value			Unit	Note	
		Min.	Typ.	Max.			
Power Supply Voltage	V_{CC}	4.5	5.0	5.5	V	(1)	
Power Supply Ripple Voltage	V_{RP}	-	-	100	mV		
Rush Current	I_{RUSH}	-	-	3.0	A	(2)	
Power Supply Current	White	I_{CC}	-	1.3	-	A	(3)
	Black		-	0.8	-	A	
	Vertical Stripe		-	1.2	-	A	

3.2 BACKLIGHT INVERTER UNIT

3.2.1 CCFL (Cold Cathode Fluorescent Lamp) CHARACTERISTICS ($T_a = 25 \pm 2 \text{ }^\circ\text{C}$)

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Lamp Voltage	V_W	-	(980)	-	V_{RMS}	$I_L = 6.0\text{mA}$
Lamp Current	I_L	5.5	6	5.5	mA_{RMS}	

3.2.2 INVERTER CHARACTERISTICS ($T_a = 25 \pm 2 \text{ }^\circ\text{C}$)

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Consumption	P_{BL}	-	(78)	-	W	
Inverter Input Voltage	V_{BL}	22.8	24	25.2	V_{DC}	
Inverter Input Current	I_{BL}	-	3.25	-	A	
Backlight Turn on Voltage	V_{BS}	(1790)	-	-	V_{RMS}	$T_a = 0 \text{ }^\circ\text{C}$
		(1200)	-	-	V_{RMS}	$T_a = 25 \text{ }^\circ\text{C}$
Oscillating Frequency	F_W		58		kHz	
Dimming Frequency	F_B		160		Hz	
Minimum Duty Ratio	D_{MN}	-	20	-	%	

3.2.3 INVERTER INTERFACE CHARACTERISTICS

Item		Symbol	Test Condition	Min.	Typ.	Max.	Unit	Note
On/Off Control Voltage	ON	V_{BLON}	-	2.0	-	5.0	V	
	OFF		-	0	-	0.8	V	
Internal/External PWM Select Voltage	HI	V_{SEL}	-	2.0	-	5.0	V	
	LO		-	0	-	0.8	V	
Internal PWM Control Voltage	MAX	V_{IPWM}	$V_{SEL} = L$	-	-	3.0	V	minimum duty ratio
	MIN			-	0	-	V	maximum duty ratio
External PWM Control Voltage	HI	V_{EPWM}	$V_{SEL} = H$	2.0	-	5.0	V	duty on
	LO			0	-	0.8	V	duty off

4. INTERFACE PIN CONNECTION

4.1 TFT LCD MODULE

CNF1 Connector Pin Assignment

Pin No.	Symbol	Description	Note
1	NC	NC	
2	NC	NC	
3	NC	NC	
4	GND	Ground	
5	RX0-	Negative transmission data of pixel 0	
6	RX0+	Positive transmission data of pixel 0	
7	GND	Ground	
8	RX1-	Negative transmission data of pixel 1	
9	RX1+	Positive transmission data of pixel 1	
10	GND	Ground	
11	RX2-	Negative transmission data of pixel 2	
12	RX2+	Positive transmission data of pixel 2	
13	GND	Ground	
14	RXCLK-	Negative of clock	
15	RXCLK+	Positive of clock	
16	GND	Ground	
17	RX3-	Negative transmission data of pixel 3	
18	RX3+	Positive transmission data of pixel 3	
19	GND	Ground	
20	NC	NC	
21	SELLVDS	Select LVDS data format	
22	NC	NC	
23	GND	Ground	
24	GND	Ground	
25	GND	Ground	
26	VCC	Power supply: +5V	
27	VCC	Power supply: +5V	
28	VCC	Power supply: +5V	
29	VCC	Power supply: +5V	
30	VCC	Power supply: +5V	

4.2 INVERTER UNIT

CN1(Header)

Pin №	Signal name	Feature
1	V _{BL}	+24 V
2		
3		
4		
5		
6	GND	GND
7		
8		
9		
10		
11	ERR	Normal (GND) Abnormal(Open collector)
12	BLON	BL ON/OFF
13	I_PWM	Internal PWM Control
14	E_PWM	External PWM Control

Notice:

#PIN 13:Analog Dimming Control (Use Pin 13) : 0V~3.3V and Pin 14 must open.

#PIN 14:PWM Dimming Control (Use Pin 14) : Pin 13 must open.

#Pin 13(I_PWM) and Pin 14(E_PWM) can not open in same period.

CN2

Pin №	Signal name	Feature
1	CFL COLD	CFL Low voltage
2	CFL COLD	CFL Low voltage

CN3-CN8

Pin №	Signal name	Feature
1	CFL HOT	CFL High voltage
2	CFL HOT	CFL High voltage

5. OPTICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio	CR	$\theta_x=0^\circ, \theta_y=0^\circ$ Viewing Normal Angle		800		-	
Response Time	Tr			3		ms	
	Tf			5			
Center Luminance of White	L _C				500		cd/m ²
Viewing Angle	Horizontal	CR \geq 10		80		Deg.	
				80			
	Vertical			70			
				60			