



Specifications of V165-001

PRODUCT: *Backlight Inverter Board*

PART NO: *V0.13165.001*

CUSTOMER PART NO: *19.21048.001*

WRITTEN	CHECKED	APPROVED
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SPECIFICATIONS OF BACKLIGHT INVERTER

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SPECIFICATIONS OF BACKLIGHT INVERTER

0.Revised History

0.1. Sep.30.2003 Eng. Rev. 1C

Initial Issue.

0.2. Oct.15.2003 Eng. Rev. 1D

Change dimensions LxWxH from $160(+0.3)\times 70.0(+0.3)\times 8.5(\text{max})$ to $160(+0.3)\times 70.0(+0.3)\times 9.2(\text{max})$

Change Rev from 1C to 1D

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1.GENERAL POPURSE

This Specification are applied to V0.13165.001 as a low noise driver for 4 CCFL. The most suitable LCD module are 17” and 19” panel.

2.INPUT CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
Input Voltage	Vin	10.8	12	13.2	VDC	
Input Current	Iin	-	-	3.0	ADC	Vin=12V, Vbri=0V
Power consumption	Pin	-	-	39.6	W	Vin=12V, Vbri=0V
Back-light On/Off control	ON	2.0	3.3	5	V	Inverter Normal Operation
	OFF	0	-	0.8	V	Inverter Off
Brightness Adjust (Lamp Current Control)	Vbri	0	-	3.3	V	0V Maximum current 3.3V Minimum current

3.OUTPUT CHARACTERISTICS

3.1:Output current adjust by PWM signal ‘ Vadj’ (LOAD :15”CCFL)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
Output Current	Io(max)	7.0	7.5	8.0	mA	Max (Vin=12V, Vbri=0V)
Output Current	Io(min)	2.0	2.5	3.0	mA	Min (Vin=12V, Vbri=3.3V)
Frequency	f	40	55	80	KHz	Vin=12V, Vbri=0V
Kickoff Voltage	Vs	1500	-	1900	Vrms	No Load ,Vin=12V
Striking Time	Ts	1.0	-	-	Sec	
Efficiency		80	-	-	%	LOAD=75K (Vin=12V, Vbri=0V)

3.2:Output current adjust by PWM signal ‘ Vadj’ (LOAD :75KÙ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
Output Current	Io(max)	7.1	7.6	8.1	mA	Max (Vin=12V, Vbri=0V)
Output Current	Io(min)	2.15	2.65	3.15	mA	Min (Vin=12V, Vbri=3.3V)
Frequency	f	48	53	58	KHz	Vin=12V, Vbri=0V
Kickoff Voltage	Vs	1500	-	1900	Vrms	No Load ,Vin=12V
Striking Time	Ts	1.0	-	-	Sec	
Efficiency		80	-	-	%	LOAD=75K (Vin=12V, Vbri=0V)

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4.ENVIRONMENT CONDITIONS

TEMPERATURE Operating : 0~40
 Storage : -40~85

HUMIDITY Operating : 10%~90% RH, Without dewdrop.
 Storage : 10%~95% RH, Without dewdrop.

DIMENSIONS LxWxH =160(+0.3)x70.0(+0.3)x9.2(max) Unit:mm

WEIGHT 60g typ.

5.Connectors & Pins Assignment

5.1 Input Connector

CN1 JST P/N : S10B-PH-SM3C-TB
ACES P/N : 88291-1000

Pin No.	Symbol	Description
1	VBL_CTRL	Enable or disable. High to light lamp
2	BRIGHTNESS	Adjust the brightness, range:0~3.3V
3,4,7,9	GND	0V
5,6,8,10	Vin	12V

5.2 Output Connector

CN2,CN3,CN4,CN5 JST P/N : SM02B-BHSS-1-TB

Pin No.	Function
1	HV
2	RTN

6.Malfunction Protection:

- SCP(Short Circuit Protection):There is no damage when short H.V. to GND.
- Open Lamp Protection: There is no damage when H.V.is open.

7.Burn-in Test

7.1:Burn-in condition:

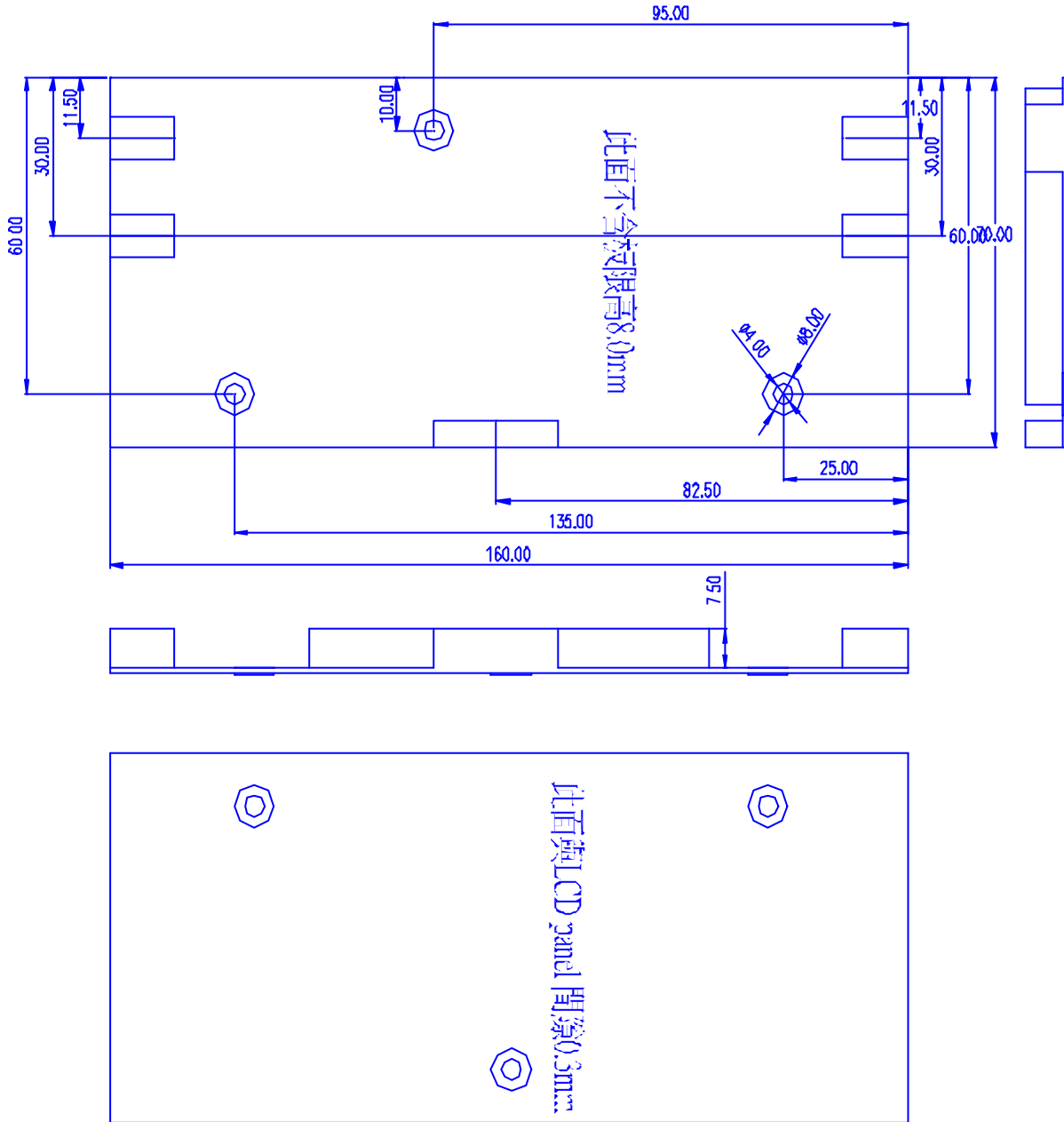
- (1) Ambient Temperature: 35 – 45 °C
- (2) Percentage of Load : 80% Full Load

7.2:Burn-in Time:

- (1)Initial Burn-in Time is 24Hr.
- (2)If the failure rate is less than 1%, then the Burn-in time can be changed to 4Hr.

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8.Mechanical Dimensions



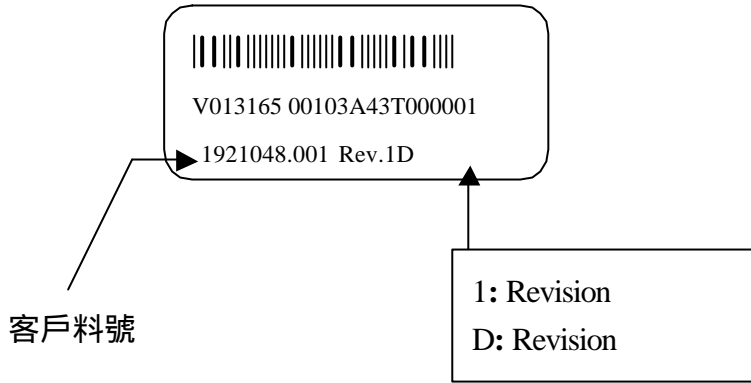
PCB:1mm

Unit:mm

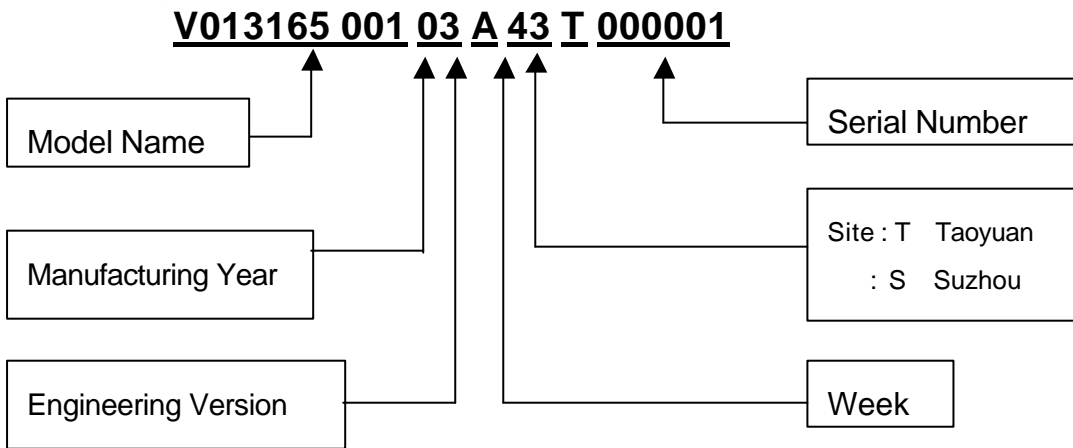
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9. Label define

9.1 PCB Label



9.2 Coding Rule



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10. Timing Sequence

