



## TI1704WM-03 INVERTER ELECTRICAL SPECIFICATION

### 1. APPLICATION

This specification is applied to CCFL inverter unit for 19" 4L color LCD backlight.  
Panel Type : AU M170EG01 V.9 & AU M170EG01 V.A & AU M170EG01 V.D &  
AU M190EN04 V.7 & AU M190EG02 V.4 & Samsung LTM190EP01 A01  
& Samsung LTM190EX-L35 Rev. PNO & CMO M190E5-L0A Rev.C1

### 2. ELECTRICAL CHARACTERISTICS

NO.	Item	Symbol	Condition	Min.	Typ.	Max.	Unit
1	Input Voltage	Vin		10.8	12.0	13.2	V
2	Input Current	Iin	Vin= 12 V, Vadj= 0 V ( 4 Lamp)	---	---	2.5	A
3	Inrush Current	Iin	Vin= --- V, Vadj= --- V (Imax)	---	---	3.5	A
4	Input Power	Pin	Vin= --- V, Vadj= --- V ( --- Lamp)	---	---	---	W
5	Backlight	Von	Normal Operation	4.0	---	5.0	V
	ON/OFF Control	Voff	Shutdown	0	---	1.2	V
6	Brightness Adjust (Lamp Current Control)	Vadj	Normal Operation	5	---	0	V
7	Output Voltage	Vout	Vin= 12 V, Iout= 7.5 mA ( 1 Lamp) (REF,VALUE)	---	760	---	Vrms
8	Output Current (Each Connector)	Iout(Max)	Vin= 12 V, Vadj= 0 V ( 1 Lamp) Ta= 25 °C, After running 30min.	7.0	7.5	8.0	mArms
		Iout(Min)	Vin= 12 V, Vadj= 5.0 V ( 1 Lamp) Ta= 25 °C, After running 30min.	2.0	2.5	3.0	mArms
9	Burst Frequency	Freq	Vin= --- V, Vadj= --- V	---	---	---	Hz
10	Frequency	Freq	Normal Operation	40	50	60	KHz
11	Lamp Start Voltage	Vopen	No Load, Vin= 12 V, Ta= 0 °C	1000	---	2200	Vrms
12	Efficiency	η	Vin= 12 V, Load= Panel	75	---	---	%
13	Striking time	Tscp	Vin= 12 V, Vadj= 0 V	1	---	2	Sec
14	Open Lamp Protection		Latched				
15	Short Lamp Protection		Latched				

Note1 : lamp start voltage is tested under all lamp opened Circuit, with Hv Probe.

Note2 : The SPEC of lamp start voltage is reference test solution of a 10cm Hv-wire connected to Hv Probe to simulate lamp wire.

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### 3. INTERFACE SPECIFICATION

Input Connector : CON1  
: CS JS-1261R-06(NM) or equ

Pin No.	Signal	Description
1	Vin	Input Voltage
2	Vin	Input Voltage
3	GND	Power System Return
4	Vbri	Lamp Control
5	GND	Power System Return
6	ON/OFF	ON / OFF Control

Output Connector : CON2,CON3,CON4,CON5  
: CS JS-2012-02(NM) or equ.

Pin No.	Signal	Description
1	Lamp High	High Voltage Output For High Side CCFL
2	Lamp Low	Low Voltage Output For Low Side CCFL

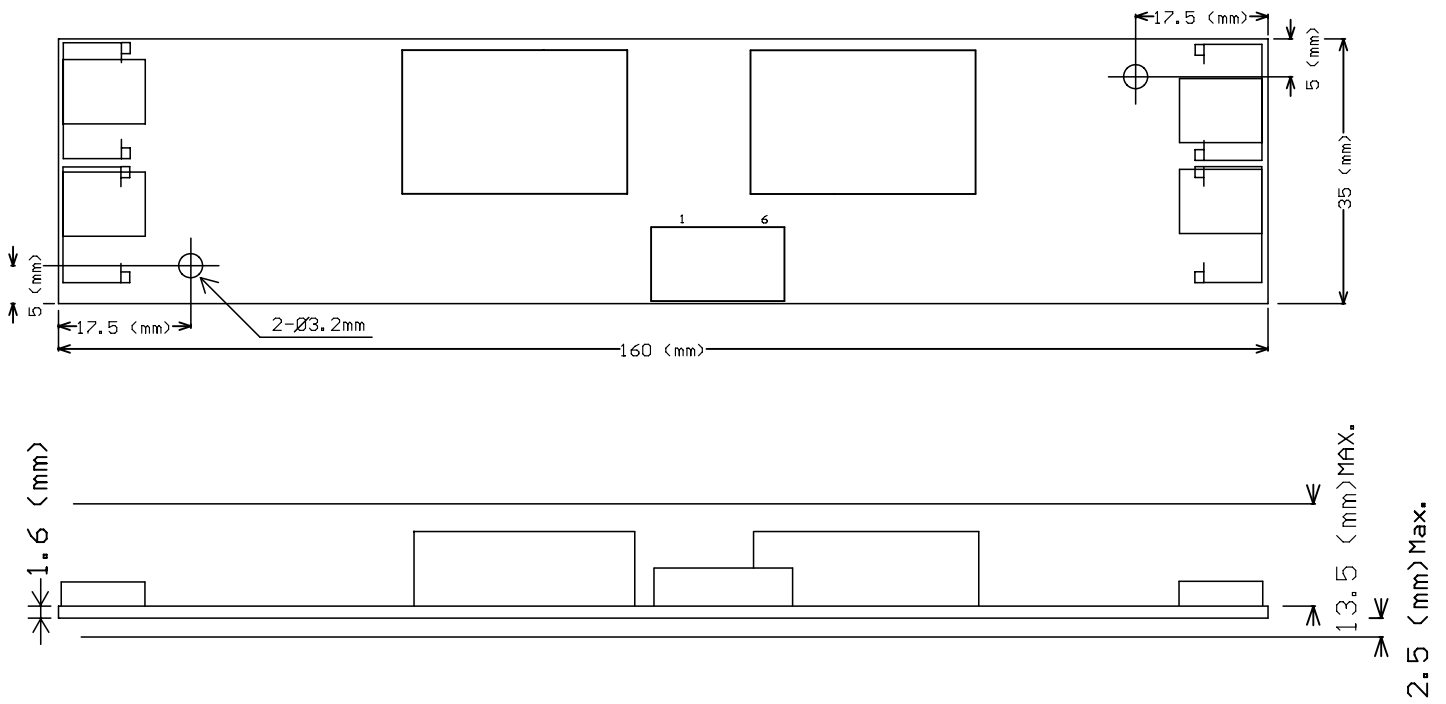
### 4. ENVIRONMENT

Operation Temperature	-10 ~ 45 °C
Operation Humidity	90 % Max. RH
Storage Temperature	- 10 ~ 85 °C
Storage Humidity	95 % Max. RH

### 5. TEST EQUIPMENT

Dc Power Supply	<input checked="" type="checkbox"/> Toward 6303D	<input type="checkbox"/> Toward 3306D	
Scope	<input type="checkbox"/> Tektronix TDS1012	<input type="checkbox"/> Tektronix TDS-360	<input checked="" type="checkbox"/> Tektronix TDS2024
	<input type="checkbox"/> Tektronix TDS 3032B	<input type="checkbox"/> Tektronix DPO 4032	
High Voltage Probe	<input checked="" type="checkbox"/> Tektronix P6015A (1000x3.0pF 100MΩ)		
Current Probe	<input type="checkbox"/> Tektronix TM502A	<input type="checkbox"/> Tektronix A6302	<input checked="" type="checkbox"/> Tektronix P6022
	<input checked="" type="checkbox"/> FLUKE45		

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<b>TPEI</b>		<b>TAIWAN POWER CONVERSION INC., LTD</b>		
<b>FILE NAME:</b> T11704WM-03	<b>PCB Material Tolerance (mm)</b>			<b>TOLERANCE DM(mm)</b>
<b>DATE:</b> 99/07/12	<b>Dimension:</b> 160 x 35mm (+/-0.5mm)	<b>T</b>	<b>1.0</b>	<b>1.2</b>
		<b>FR4</b>	+0.20/-0.13	+0.20/-0.13
		<b>FR1</b>	+0.18/-0.13	+0.18/-0.13
		<b>CEM1</b>	+0.18/-0.13	+0.18/-0.13
		<b>1.6</b>	+0.20/-0.13	+0.20/-0.13
		<b>X.</b>	+/-0.5	+/-0.5
		<b>XX</b>	+/-0.25	+/-0.25
		<b>XXX</b>	+/-0.12	+/-0.12
		<b>XXX</b>	+/-0.08	+/-0.08