IXL-400-01

LED BACKLIGHT INVERTER

FUNCTIONAL DRAFT SPECIFICATION

(This document is meant for customers' approval)

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1. Application

This inverter is designed for the backlight of the LCD panel with LED (Light Emitted Diode Lamp), and it's used in the LCD TV Set or Monitor.

1.1 Applicable load: From18.5 inch to 23 inch LCD Panel

1.2 Notice:

1.2.1 For safety issue, Please keep 4.0mm at least from the metal parts of the system to the inverter or Put a High-voltage insulator between the inverter and the metal parts to avoid the situation of high Failure or Arcing (ETC)

1.2.2 Don't twist, deform, drop or knock the inverter during assembly.

1.2.3 The inverter is usually designed without the case. Please take care about ESD at anytime.

1.2.4 Due to the characteristic of panels, the brightness is sensitive about temperature; you must Measure it in the same condition and be waiting for 5to10 minutes after the power on.

2. Environment characteristics

2.1 Temperature

Storage: -20°C ~70°C .

Operating: 0°C~60°C.

2.2 Humidity

Storage: Ha=95%RH, non-condensing

Operating: Ha=95%RH, non-condensing

3. Features

3.1 Open lamp or short circuit protection

3.2 Soft start or soft on/off control

3.3 Constant operating frequency.

4. Operating characteristics

Parameter	Symbol	MIN	TYP	MAX	Unit	Remark
Input Voltage	Vin	+10.8	+12.0	+13.0	V	
LED String Voltage	VLED	30	-	50.4	V	
Output Current	Iout	80	-	290	mA	
Dimming Ratio				3000:1		
PWM Control Duty Ratio	Vout	0	-	100	%	
PWM Swing Voltage		0	-	3.3	V	
DC Voltage Dimming Control		0		5	V	

Note1: Backlight LED power consumption is calculated by PL=VL X IL.

Note2: The life time of a LED is defined as when the brightness is larger than 50% of its original value and the effective discharge length is longer than 80% of its original length (Effective discharge length is defined as an area that has equal to or more than 70% brightness compared to the brightness at the center point of LED.) As the time in which it continues to operate under the condition at Ta = 25 ±2°C.

5. PIN Assignments

5.1 DC Input (CN4)

Pin No.	Symbol	Description
1	VIN	DC +12V
2	GND	Ground
3	Brightness	Brightness control 0V ~ 5V
4	GND	Ground
5	Control	ON/OFF control 5V (ON) 0V (OFF)

5.2 AC Output (CN7, CN8)

Pin No.	Symbol	Description
1	LED –	LED Low Voltage
2	LED +	LED High Voltage

6. Mechanical Characteristics

Dimension: 75 (L) x 30 (W)