AIN-LED009-01-1

~ LED Driver Board for High Brightness LCD Panel

2017/5/31

Engineering Specifications v.1.4

( ) Preliminary Specifications

(√) Final Specifications

[This specification is subject to change without notice.]

Company Confidential

Approved by	Checked by	Prepared by
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PROPRIETARY NOTICE

RECORD OF REVISION

Version	Date	Page	Original Description	New Description	ECN#
1.0	2014/12/22	All	First draft	All	N/A
1.1	2015/04/08	All		All	N/A
1.2	2015/10/28	9		Add driver board and packing photo	N/A
1.3	2016/10/19	9		Add label	1610002
		9		Cancel unnecessary connector	1610002
1.4	2017/05/31	5		Delete LCD APPLICATION	N/A
				Update OPERATING CONDITIONS	N/A
		6		Add PWM Frequency	N/A

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ENGINEERING SPECIFICATIONS

1 | GENERAL

This DC to DC high output LED driver board is designed to supply steady current for the LED backlight. It supports PWM and Analog brightness adjustment, and it is pursued for high performance and exellent quality.

2 | FEATURE

Constant Current Output

High Frequency, High Efficiency

PWM and DC Brightness Adjustment

Over Voltage Protection

UVLO (Under Voltage Lock Out)

Meet TCO 99

3 | OPERATING CONDITIONS

Item	Symbol	Conditions	MIN	MAX	Unit	Remark
Input Voltage	Vin		10.8	--	V	
Operation Temperature	Top	Ha=90%RH or below	-30	85	℃	
Storage Temperature	Tstg	Ha=95%RH or below	-40	105	℃	
Operating Humidity	Hop	Ta=-20～85 ℃	20	90	%RH	
Storage Humidity	Hstg	Ta=-30～105 ℃	-	95	%RH	

4 | OPERATING CHARACTERISTICS

Item	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	Remark
Input Voltage	Vin	GND=0V	10.8	12	13.2	V	
Input Current (Low Brightness)	IinL	Vin =TYP. ±1% VR=MIN (I out =MIN)	80	100	120	mA	CV=3.16V
Input Current (High Brightness)	IinH	Vin =TYP. ±1% VR=MAX (I out =MAX)	1550	1880	2450	mA	CV=0V
LED Current (Low Brightness)	IoutL	Vin =TYP. ±1% VR=MIN (I out =MIN)	10	25	40	mA rms	CV=3.16V
LED Current (High Brightness)	IoutH	Vin =TYP. ±1% VR=MAX (I out =MAX)	650	670	690	mA rms	CV=0V
Working Frequency			120	130	140	KHZ	
Dimming		Output Constant	5%	--	100%		
Brightness Control		Voltage	3.16	--	0	V	
Output Voltage Protection				40		V	
PWM Frequency			20	--	20K	Hz	

5 | CONNECTOR SOCKET

5-1. (CN1) Input Connector

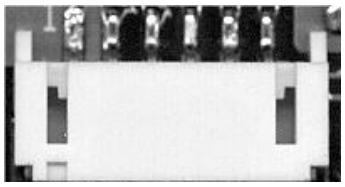
PIN No	Symbol	Description
1	Vin	Input Voltage 12V
2	Vin	Input Voltage 12V
3	Control	ON/OFF control ON=+1.5~5V OFF=0~0.8V
4	PWM / DC Adjust	Brightness control (3.16V Min) ~ (0V Max)
5	GND	Ground
6	GND	Ground

5-2. (CN4) Output Connector

PIN No	Symbol	Description
1	Anode(+)	Output Voltage
2	Cathode(-)	LED Cathode

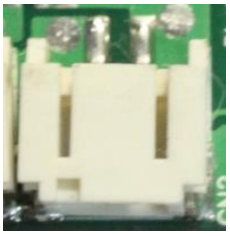
5-3. Connector Model No & Brand

Connector No.	Connector Parts No	Brand	Remark
CN1	S6B-PH-SM4	JST or compatible	
CN4	S2B-PH-SM4	JST or compatible	



S6B-PH-SM4

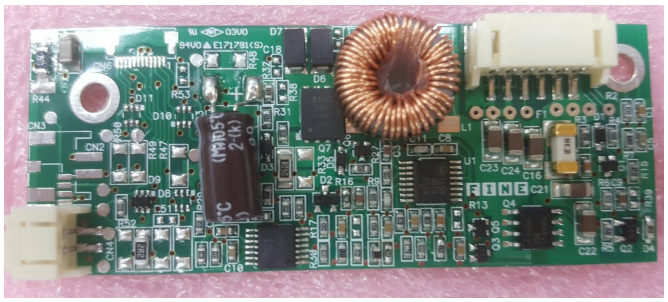
(pin1)



S2B-PH-SM4

(pin1)

6| DRIVER BOARD AND PACKING PHOTO

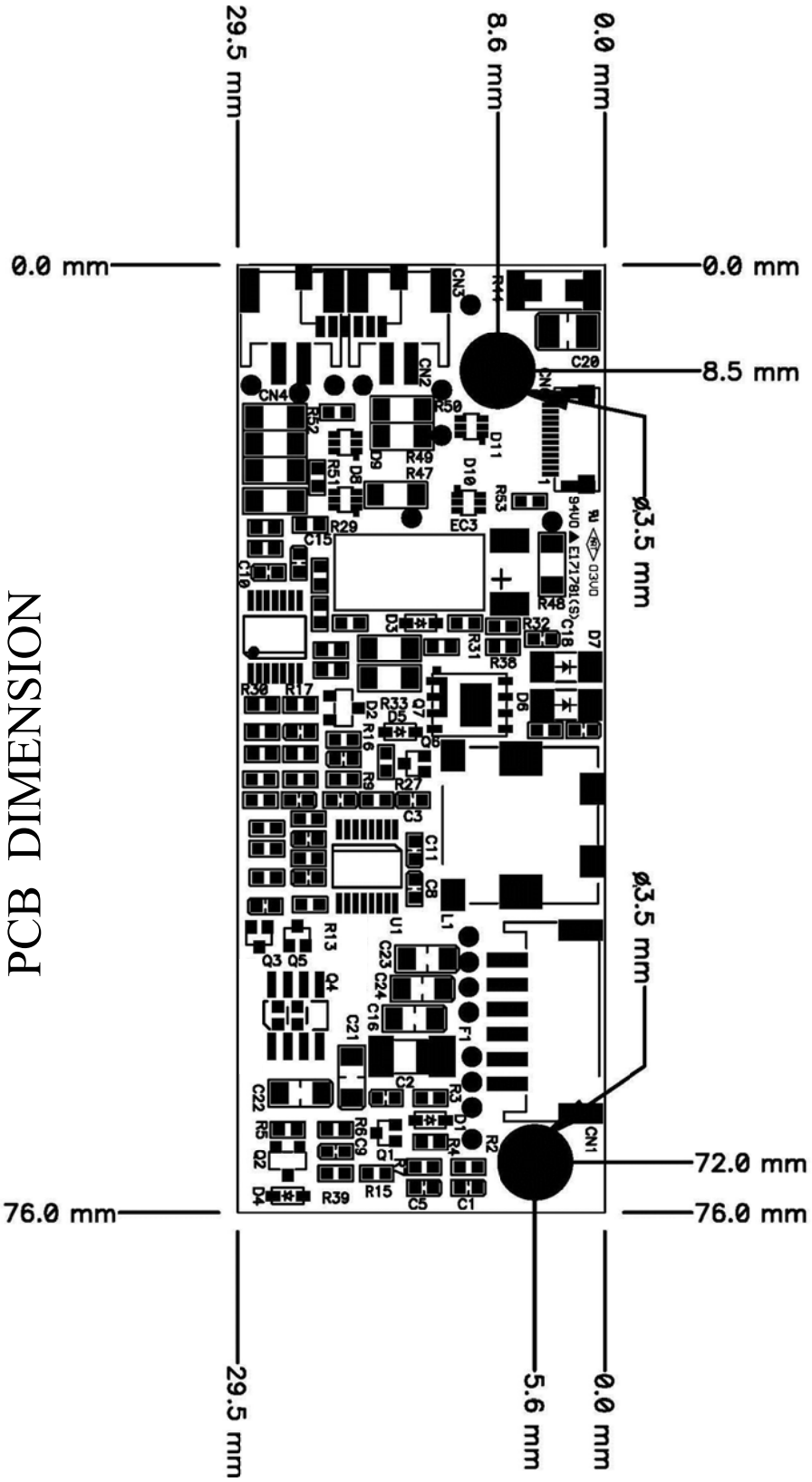


7| MECHANICAL CHARACTERISTICS

Dimension:76mm * 29.5mm * 10mm

Weight: MAX. 14g

PCB DIMENSION



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