

# LED-CONVERTER UNIT

PS-LD0801-yyy(S) (7 W)

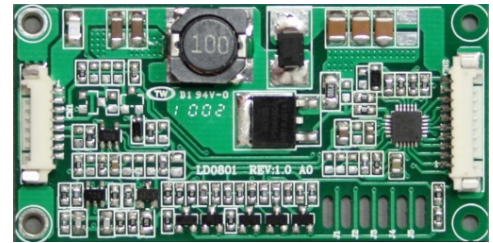
(PRELIMINARY INFORMATION)

**DESCRIPTION :**

This low profile LED-Converter is developed for max. 8 LED-lines

**APPLICABLE:**

- 1~8 LED lines (Serial Mode)
- Pout max. 0,875 Watt per line, total max. 7 Watt
- LED Voltage max. 45V
- Lamp Current max. 50mAdc per line



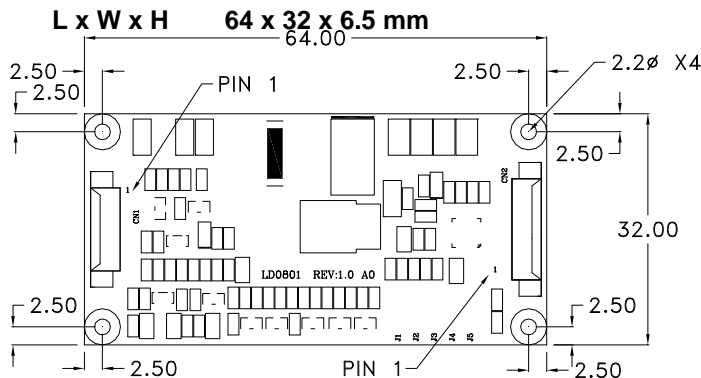
**FEATURES :**

- Internal Open LED Detection for every Line
- Analog or ext. PWM Dimming
- 1000:1 dimming ratio with external PWM
- Remote ON / OFF
- Wide Input Voltage Range
- Optional: Vst signal for LED failure
- RoHS compliant (S)

**TEMPERATURE & HUMIDITY :**

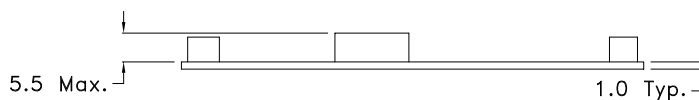
- Operating Temperature Range -20°C ~ +70°C
- Storage Temperature Range -20°C ~ +85°C
- Humidity 95 %RH max

**DIMENSIONS :**



Weight :5 (g) typ.

UNIT: mm TOLERANCE: ±0.3mm



**Components**

No.	Part Description	Qty.	Material	Note
1	PCB	1	UL94V-0 (FR-4 or CEM-3)	t=1.0mm
2	Connector CN1	1	53261-0890	Molex
3	Connector CN2	1	53261-1090	Molex

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## Input side CN1

Pin No.	Symbols	Ratings
CN 1-1	Vin	4.75 ~ 13.2 Vdc
CN 1-2	Vin	4.75 ~ 13.2 Vdc
CN 1-3	Vrmt	0 ~ 0.8 = OFF / 2.5 ~ Vin = ON
CN 1-4	Ext. PWM	0 ~ 0.5 = LOW / 2.5 ~ 5 = HIGH
CN 1-5	Vbr	0.0 ~ 5.0 (5V=low brightness)
CN 1-6	N.C.	
CN 1-7	GND	-
CN 1-8	GND	-

## Output side CN2:

Pin No.	Symbols	Ratings
CN2-1	RTN1 (-)	LED LINE 1 RETURN
CN2-2	RTN2 (-)	LED LINE 2 RETURN
CN2-3	RTN3 (-)	LED LINE 3 RETURN
CN2-4	RTN4 (-)	LED LINE 4 RETURN
CN2-5	RTN5 (-)	LED LINE 5 RETURN
CN2-6	RTN6 (-)	LED LINE 6 RETURN
CN2-7	RTN7 (-)	LED LINE 7 RETURN
CN2-8	RTN8 (-)	LED LINE 8 RETURN
CN2-9	Vhigh (+)	max. 45Vdc
CN2-10	Vhigh (+)	max. 45Vdc

## Output Current Select Control

Jumper	JP 1	JP 2	JP 3	JP 4	JP 5	Output Current
Break	✕					+1 mA
Break		✕				+2 mA
Break			✕			+4 mA
Break				✕		+8 mA
Break					✕	+15 mA

Example:

**20mA** (Output Current Min.) + **1mA** (JP1) = **21mA**

**20mA** (Output Current Min.) + **8mA** (JP4) = **28mA**

JP1 ~ JP5 OPEN = **50mA**

For more information, please visit our web-site.

## ELECTRICAL CHARACTERISTICS :

Parameters	Symbols	Conditions			Specification			Unit	Note
		Vin (V)	Vbr (V)	Tu (°C)	Min.	Typ.	Max.		
Output Current	Iout	4.75 ~ 13.2	0	-20~+70	18	20	22	mAdc	Duty 100% max current
Output Current	Imin	4.75 ~ 13.2	5	-20~+70	-	10	-	%	duty cycle
Input Current	Iin	4.75 ~ 13.2	0	-20~+70	0.4	-	1.8	Adc	
Open Load Shutdown	Vbias	4.75 ~ 13.2	0	-20~+70	-	45	-	Vdc	
PWM Frequency	f(PWM)	4.75 ~ 13.2	0	-20~+70	150	-	300	Hz	
Output Power	Pout	4.75 ~ 13.2	0	-20~+70	TBD	7	TBD	Watt	Tu: -20~+50degC
Output Power	Pout	4.75 ~ 13.2	0	-20~+70	TBD	5	TBD	Watt	Tu: -20~+70degC
Output Power	Pout	4.75 ~ 13.2	0	-20~+50	TBD	0.8	TBD	Watt	For one line
Output Power	Pout	4.75 ~ 13.2	0	-20~+70	TBD	0.6	TBD	Watt	For one line

## Power Systems – The Power Solution

Web: [www.Power-Systems.de](http://www.Power-Systems.de)  
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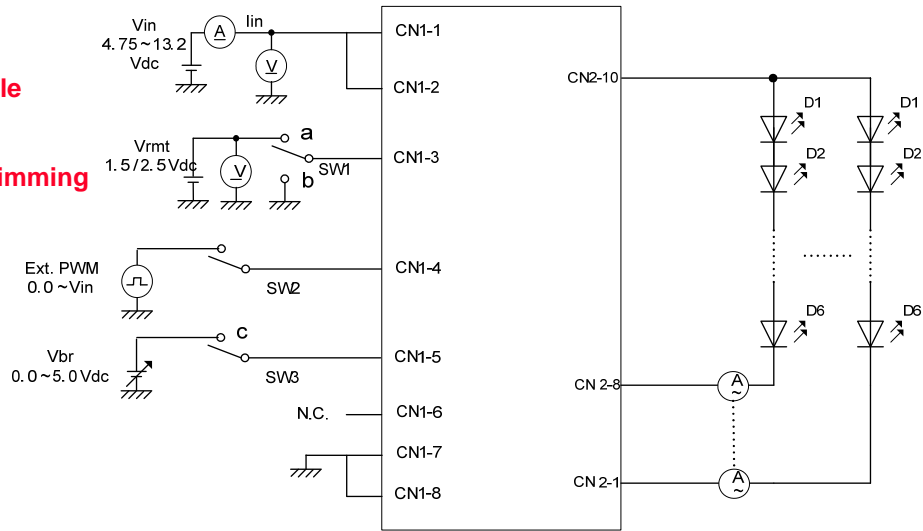
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**TEST CIRCUIT :**

Connect Vbr to Ground while using ext. PWM dimming.

Do not connect ext. PWM dimming while using Vbr.



- Note 1 : Do not use analog dimming and external PWM dimming at the same time.
- Note 2 : External PWM-signal is LOW active.
- Note 3 : Do not use output 1 when you need to connect only 5 or less outputs.  
Examples: Connect pin 2+3+4+5+6 when only 5 are needed.
- Note 4 : If you want: Vst signal for LED failure message

**ORDER KEY :**

**PS-LD0801-yyy**

When ordering of this converter please give the following key:

A pre-configured order can be placed from 300 pieces upwards

-yyy is to be replaced by:

Three digit value for required output current per LED line (from 010 to 030 including)

- Attention:**
- \* If no value is mentioned, 20 mA output current per LED line will be set as default
  - \* Incorrect LED currents can reduce the lifetime of the backlight or even destroy it
  - \* Orders for pre-configured converters can't be cancelled

Examples:

PS-LD0801-030 (S)  
30 mA output current

PS-LD0801-045 (S)  
45 mA output current

**CABLES :**

- for input:** 500 mm, stripped and tinned ends, order key <input cable #13>
- for output:** 500 mm, stripped and tinned ends, order key <input cable #6>