

# LED-CONVERTER UNIT

PS-LD0602-x-yyy(S) (3 W)

(PRELIMINARY INFORMATION)

**DESCRIPTION :**

This low profile LED-Converter is developed for max. 6 LED-lines

**APPLICABLE:**

- 1~6 LED lines (Serial Mode)
- Pout max. 0,9 Watt per line, total max. 3 Watt
- LED Voltage max. 35V
- Lamp Current max. 35 mAdc per line

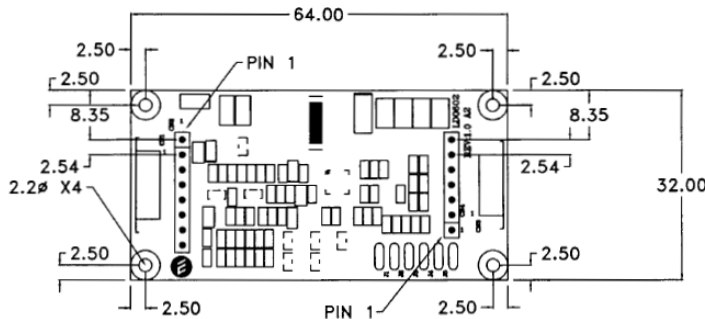
**FEATURES :**

- 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
- RoHS compliant (S)

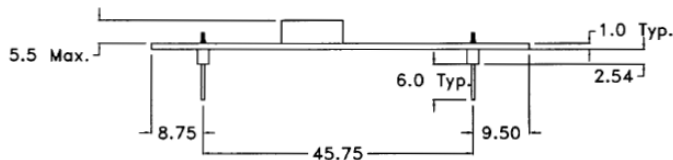
**TEMPERATURE & HUMIDITY :**

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

**DIMENSIONS :** L x W x H 64 x 32 x 6.5 mm

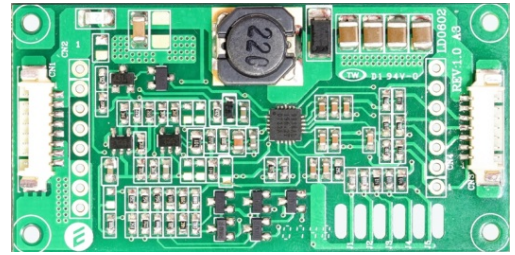


UNIT:mm TOLERANCE:±0.3mm



Connector style

Pin-terminal style



Weight :5 (g) typ.

Pin terminal length may differ

**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 CN3	1	53261-0790	Molex

**Power Systems – The Power Solution**

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**Input side CN1/CN2:**

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	GND	-
CN 1-7	GND	-
CN 1-8	GND	-

**Output side CN3 / CN4**

Pin No.	Symbols	Ratings
CN3 / 4-1	RTN1 (-)	LED LINE 1 RETURN
CN3 / 4-2	RTN2 (-)	LED LINE 2 RETURN
CN3 / 4-3	RTN3 (-)	LED LINE 3 RETURN
CN3 / 4-4	RTN4 (-)	LED LINE 4 RETURN
CN3 / 4-5	RTN5 (-)	LED LINE 5 RETURN
CN3 / 4-6	RTN6 (-)	LED LINE 6 RETURN
CN3 / 4-7	Vhigh (+)	max 30Vdc (max.30mAdc)

**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					✗	+5 mA

Example:

10mA (Output Current Min.) + 1mA (JP1) = 11mA

10mA (Output Current Min.) + 8mA (JP4) = 18mA

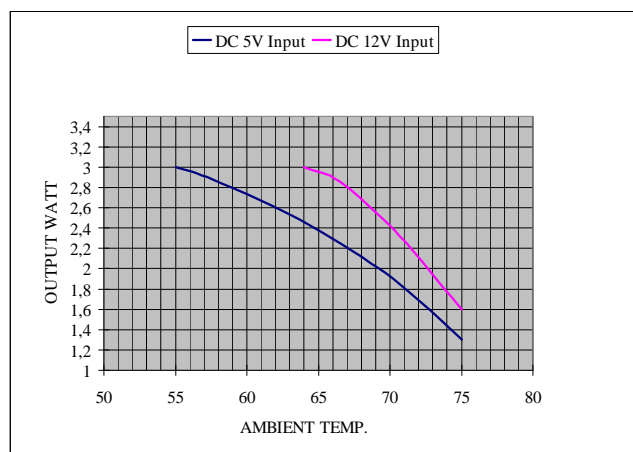
JP1 ~ JP5 OPEN = 30mA

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	8	10	12	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	0.06	-	0.3	Adc	
Open Load Shutdown	Vbias	4.75 ~ 13.2	0	-20~+70	-	35	-	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	3	TBD	Watt	Tu: -20~+50degC
Output Power	Pout	4.75 ~ 13.2	0	-20~+70	TBD	1.9	TBD	Watt	Tu: -20~+70degC
Output Power	Pout	4.75 ~ 13.2	0	-20~+50	TBD	0.9	TBD	Watt	For one line
Output Power	Pout	4.75 ~ 13.2	0	-20~+70	TBD	0.6	TBD	Watt	For one line

**DERATING:**



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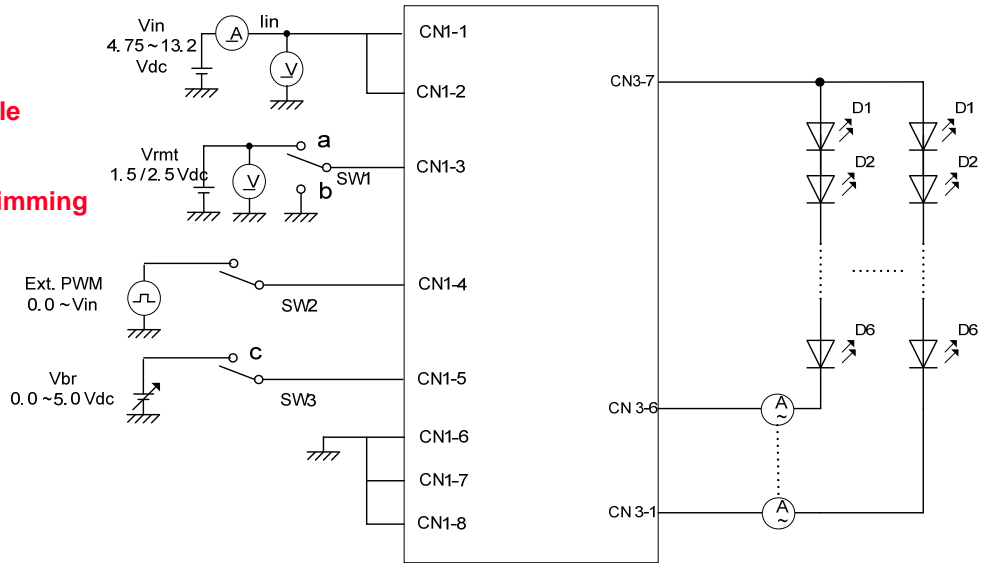
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**TEST CIRCUIT :**

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 : Pin Terminal Style converters are mounted with Molex connectors.
- Note 3 : External PWM-signal is LOW active.
- Note 4 : 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.
- Note5 : In case of not needing to connect all outputs please ask factory which pins to connect according to your needs.

**ORDER KEY :**

**PS-LD0602-x-yyy**

When ordering this converter please give the following keys:

- x is to be replaced by:
  - 1 for connectors
  - 2 for Pin-Terminal

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:**
- \* 10 mA output current per LED line will be set as default when no specific current is mentioned
  - \* Incorrect LED currents can reduce the lifetime of the backlight or even destroy it
  - \* Orders of pre-configured converters can't be cancelled

Examples:

PS-LD0602-1-015 (S)  
15 mA output current  
PCB with connectors

PS-LD0602-2-025 (S)  
25 mA output current  
PCB with Pin-Terminal

**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 #4>

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