

LED-CONVERTER UNIT

PS-LD0605-01(S) (4.5 W)

(PRELIMINARY INFORMATION)

DESCRIPTION :

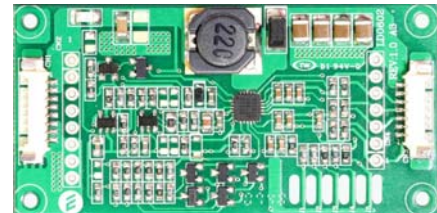
This low profile LED-Converter is developed for max. 6 LED-lines

APPLICABLE:

- 1~6 LED lines (Serial Mode)
- Pout max. 0,9 Watt per line, total max. 4,5 Watt
- LED Voltage max. 27V
- Lamp Current max. 60 mAdc per line

FEATURES :

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



Connector style

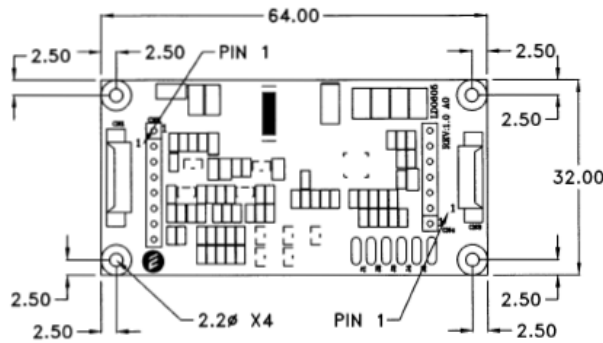
Pin-terminal style



TEMPERATURE & HUMIDITY :

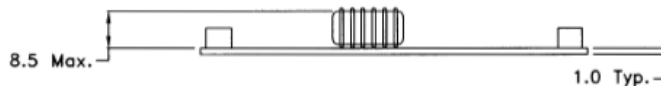
- Operating Temperature Range -20°C ~ +70°C
- Storage Temperature Range -20°C ~ +85°C
- Humidity 95 %RH max

DIMENSIONS : L x W x H 64 x 32 x 9.5 mm



UNIT: mm TOLERANCE: ±0.3mm

Weight :9 (g) typ.



Pin terminal length may differ

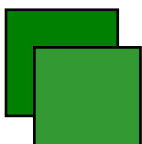
Components

| 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 | JST |

Power Systems – The Power Solution

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Input side CN1

| Pin No. | Symbols | Ratings |
|---------|----------|--------------------------------|
| CN 1-1 | Vin | 4.75 ~ 5.25 Vdc |
| CN 1-2 | Vin | 4.75 ~ 5.25 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 | RTN6 (-) | LED LINE 6 RETURN |
| CN3 / 4-2 | RTN5 (-) | LED LINE 5 RETURN |
| CN3 / 4-3 | RTN4 (-) | LED LINE 4 RETURN |
| CN3 / 4-4 | RTN3 (-) | LED LINE 3 RETURN |
| CN3 / 4-5 | RTN2 (-) | LED LINE 2 RETURN |
| CN3 / 4-6 | RTN1 (-) | LED LINE 1 RETURN |
| CN3 / 4-7 | Vhigh (+) | max 27Vdc (max.27mAdc) |

Output Current Select Control

| Jumper | JP 1 | JP 2 | JP 3 | JP 4 | JP 5 | Output Current |
|--------|------|------|------|------|------|----------------|
| Break | ✗ | | | | | +2 mA |
| Break | | ✗ | | | | +4 mA |
| Break | | | ✗ | | | +6 mA |
| Break | | | | ✗ | | +8 mA |
| Break | | | | | ✗ | +10 mA |

Example:

30mA (Output Current Min.) + **2mA** (JP1) = **32mA**

30mA (Output Current Min.) + **8mA** (JP4) = **38mA**

JP1 ~ JP5 OPEN = **60mA**

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 ~ 5.25 | 0 | -20~+70 | 28 | 30 | 32 | mAdc | Duty 100% max current |
| Output Current | Imin | 4.75 ~ 5.25 | 5 | -20~+70 | - | 10 | - | % | duty cycle |
| Input Current | Iin | 4.75 ~ 5.25 | 0 | -20~+70 | 0.06 | - | 0.3 | Adc | |
| Open Load Shutdown | Vbias | 4.75 ~ 5.25 | 0 | -20~+70 | - | 27 | - | Vdc | |
| PWM Frequency | f(PWM) | 4.75 ~ 5.25 | 0 | -20~+70 | 150 | - | 300 | Hz | |
| Output Power | Pout | 4.75 ~ 5.25 | 0 | -20~+70 | TBD | 3 | TBD | Watt | Tu: -20~+50degC |
| Output Power | Pout | 4.75 ~ 5.25 | 0 | -20~+70 | TBD | 1.9 | TBD | Watt | Tu: -20~+70degC |
| Output Power | Pout | 4.75 ~ 5.25 | 0 | -20~+50 | TBD | 0.9 | TBD | Watt | For one line |
| Output Power | Pout | 4.75 ~ 5.25 | 0 | -20~+70 | TBD | 0.6 | TBD | Watt | For one line |

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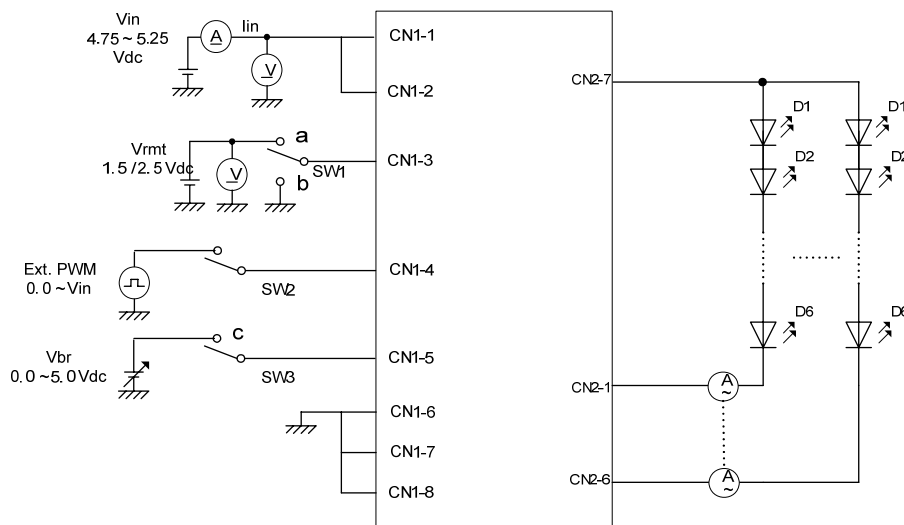
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TEST CIRCUIT :

Connect Vbr to Ground while using ext. PWM dimming.



- Note 1 : Do not use analog dimming function and external PWM for dimming at the same time.
- Note 2 : Pin terminal style converters have Molex connectors mounted.
- Note 3 : Above output current is the default value. Correct output current is to be selected by user and under his sole responsibility. Exceeding currents will damage the LED backlight.
- Note 4 : External PWM-signal is LOW active.
- Note 5 : Do not use output 1 in case you connect only 5 (or less) outputs. Examples: Use 4 outputs only 1 then connect Pin 2+3+4+5.
- Note 6 : In case customer do not connect all output, please ask factory.

ORDER KEY :

PS-LD0605-01-x-yyy

With order of this converter please give the following key:

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

in case of quantity orders (300+ pcs), a pre-configuration can be ordered:

-yyy 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, 10 mA output current per LED line will be set as default
- * a selection of incorrect LED current may decrease lifetime or destroy the backlight
- * orders for pre-configured converters can't be cancelled

Examples:

PS-LD0605-01-1-034 (S)
34 mA output current
PCB with connectors

PS-LD0605-01-2-58 (S)
58 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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