

## LED-CONVERTER UNIT

**PS-LD0301-027-B(S)**

(PRELIMINARY INFORMATION)

### DESCRIPTION :

This low profile LED-Converter is developed for max. 3 LED-lines  
Optimized for **Sharp: LQ084V3DG02**

### APPLICABLE:

2 LED lines (Serial Mode)  
Pout max. 7W  
LED Voltage max. 25Vdc  
Lamp Current max. 100mAdc



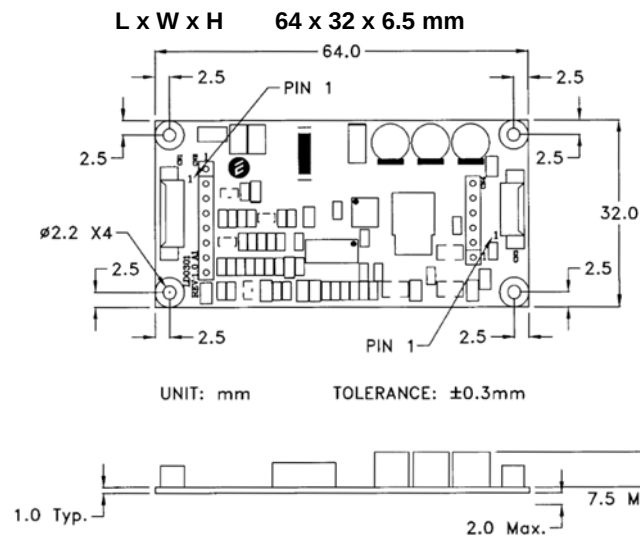
### FEATURES :

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)

### TEMPERATURE & HUMIDITY :

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

### DIMENSIONS :



Weight :8 (g) typ.

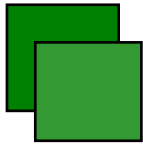
### Components

| 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 / PBD        | Molex   |
| 3   | Connector CN3    | 1    | 53261-0690 / PBD        | Molex   |

### Power Systems – The Power Solution

Web: [www.Power-Systems.de](http://www.Power-Systems.de)  
Email: [Info@Power-Systems.de](mailto:Info@Power-Systems.de)

Address: Hauptstr. 48 ; 74360 Ilsfeld-Auenstein / Germany  
Tel. : + 49 / 70 62 / 67 59 - 6  
Fax: + 49 / 70 62 / 67 59 - 800



## LED-CONVERTER UNIT

PS-LD0301-027-B(S)

(PRELIMINARY INFORMATION)

### 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 ~ 1.5 = 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           |
|---------|----------|-------------------|
| CN 3-1  | RTN1(-)  | LED LINE 1 RETURN |
| CN 3-2  | RTN2(-)  | LED LINE 2 RETURN |
| CN 3-3  | RTN3(-)  | N.C.              |
| CN 3-4  | Vhigh(+) | TBD               |
| CN 3-5  | Vhigh(+) | TBD               |
| CN 3-6  | Vhigh(+) | TBD               |

### 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 | TBD           | 100  | TBD  | 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 | TBD           | 1.0  | TBD  | Adc  | *By 12Vdc             |
| Open Load Shutdown | Vbias   | 4.75 ~ 13.2 | 0       | -20~+70 | -             | 28   | -    | 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           | TBD  | TBD  | Watt | Tu: -20~+50degC       |
| Output Power       | Pout    | 4.75 ~ 13.2 | 0       | -20~+70 | TBD           | TBD  | TBD  | Watt | Tu: -20~+70degC       |
| Output Power       | Pout    | 4.75 ~ 13.2 | 0       | -20~+50 | TBD           | TBD  | TBD  | Watt | For one line          |
| Output Power       | Pout    | 4.75 ~ 13.2 | 0       | -20~+70 | TBD           | TBD  | TBD  | Watt | For one line          |

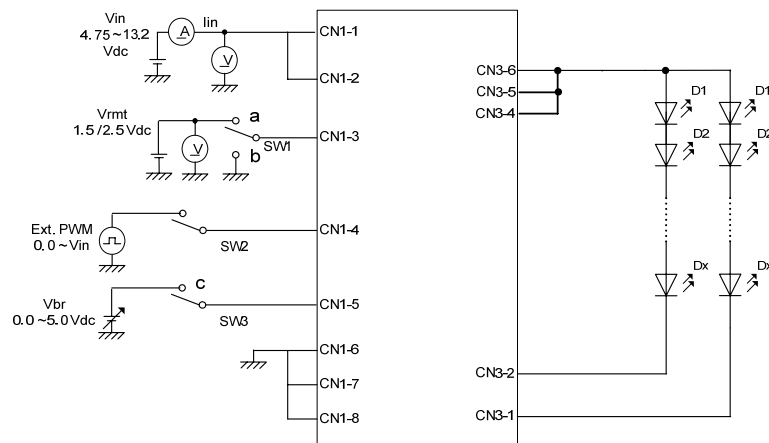
Note 1 : Do not use analog dimming function and external PWM for dimming at the same time.

Note 2 : Pin terminal style converters have Molex connectors mounted.

Note 3 : External PWM-signal is Low active.

### TEST CIRCUIT :

Connect Vbr to Ground while using ext. PWM dimming.



### CABLES :

For input: 500 mm, stripped and tinned ends, order key < input cable # 13>

For output: For Sharp LQ084V3DG02: matching connectors, 300mm, order key <Adapter cable 9>

### Power Systems – The Power Solution

Web: [www.Power-Systems.de](http://www.Power-Systems.de)  
Email: [Info@Power-Systems.de](mailto:Info@Power-Systems.de)

Address: Hauptstr. 48 ; 74360 Ilsfeld-Auenstein / Germany

Tel. : + 49 / 70 62 / 67 59 - 6

Fax: + 49 / 70 62 / 67 59 - 800