LSDCD060 Series



60W, 10~30Vdc Input, Constant Current, DC-DC LED Driver



- Features
 - Power Rating: 60W
 - Input Voltage: 10~30Vdc •
 - Constant current design
 - Output current(640mA-1050mA)
 - Efficiency up to 94%
 - Dimmable with 0-10V dimming (optional)
 - OVP, OCP, OTP and SCP
 - Potted, watertight

Application

- Indoor or outdoor lights

| Model List* | WIODEI LIST *(See part number scheme for model number details) | | | | | | |
|----------------|---|-----------------|-------------------|------------------------|------------------------|------------|---------------|
| Model Number | Input Voltage Range | Output Power | Output Voltage | Output Current Min. | Output Current Max. | Efficiency | Certification |
| LSDC-060S064SS | 10~30Vdc | 60W | 33~94V | 640mA | 640mA | 94% | CE |
| LSDCD060S064SS | 10~30Vdc | 60W | 33~94V | 640mA | 640mA | 94% | CE |
| LSDC-060S070SS | 10~30Vdc | 60W | 33~87V | 700mA | 700mA | 94% | CE |
| LSDCD060S070SS | 10~30Vdc | 60W | 33~87V | 700mA | 700mA | 94% | CE |
| LSDC-060S105SS | 10~30Vdc | 60W | 33~57V | 1050mA | 1050mA | 94% | CE |
| LSDCD060S105SS | 10~30Vdc | 60W | 33~57V | 1050mA | 1050mA | 94% | CE |

*(-=No dimming/D=Dimming)

NOTE: All Applications require an In-Line fuse on the input and to be installed by the user.

Disclaimer:

Autec Power Systems' (Autec) LED Drivers are Hi-Pot tested during the manufacturing process. Autec assumes no responsibility for secondary Hi-Pot testing at customer location or designated production line(s). Should customer require further Hi-Pot testing, at their own production line, following assembly of the LED Driver into the customer's assembled fixture, Autec requests advance notice. This request must be communicated to Autec in a timely manner and is recommended to be requested at time of issuing each purchase order.





Technical Data

| Input Voltage Range | 10~30Vdc | | | | |
|--------------------------------|--|--|--|--|--|
| Max Input Current | 5.4A @full load, Vin=12V, Po=60W | | | | |
| | 2.6A @full load, Vin=24V, Po=60W | | | | |
| Load Regulation | ±1% | | | | |
| Line Regulation | ±1% | | | | |
| Set up Rise Time | 240ms/40ms 12Vdc full load; 250ms/98ms 24Vdc full load | | | | |
| DC Current typ. | 5.4A/12Vdc; 2.6A/24Vdc | | | | |
| Inrush Current | 68A @12Vdc; Cold Start | | | | |
| Leakage Current | <0.6mA/12Vdc | | | | |
| Turn-on Delay Time | < 0.25s | | | | |
| Ripple & Noise (pk-pk) | 0.42V(640mA); 0.46V(700mA); 0.25V(1050mA) | | | | |
| Over Current Protection | 95~108%; Protection type: Constant current limiting, recovers automatically after fau | | | | |
| | condition is removed | | | | |
| Short Circuit Protection | Hiccup mode, recovers automatically after fault condition is removed. | | | | |
| Over Voltage Protection | 99V(640/700mA) 67V(1050mA); Protection Type: Hiccup mode recovers automatically after fault condition is removed | | | | |
| Over Temperature Protection | Hiccup mode, recovers automatically after fault condition is removed | | | | |
| Operating temperature | -35 ~ +70°C | | | | |
| Storage temperature | -40 ~ +85°C | | | | |
| Humidity | Operational: 10~100% RH non-condensing | | | | |
| | Storage: 5~100% RH | | | | |
| Temperature Coefficient | ±0.3%°C(0~50°C) | | | | |
| Vibration | 10~500Hz, 5G 12min./1 cycle, period for 72min. each along X, Y, Z, axes | | | | |
| MTBF | 430,000 hours MIL-HDBK-217F (25°C) | | | | |
| Life rating | 60,000 hours | | | | |
| Length (L) | 4.88" (124mm) | | | | |
| Width (W) | 1.92" (49mm) | | | | |
| Height (H) | 1.29" (33mm) | | | | |
| Weight | 340g | | | | |
| Packing | 36pcs/case | | | | |

Notes:

1. All parameters NOT specifically mentioned are measured at 24Vdc input, rated load and 25°C of ambient temperature.

- 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted-pair wire terminated with 0.1uF & 47uF parallel capacitors.
- 3. Tolerance: includes set up tolerance, line regulation, & load regulation.
- 4. Derating may be needed under low input voltages. Please check the static characteristic for details.
- 5. Suitable for indoor or outdoor use without exposure to direct sunlight. Avoid exposure or immersion in water exceeding the IP67 rating.
- 6. The driver (PSU) start-up time is measured from initial cold start.

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| July 17, 2019 | | | | | | |



- 7. The driver (PSU) is considered a component that will be operated as part of a finished lighting assembly. The manufacturer of the finished lighting assembly must ensure EMC Directive compliance for the completed assembly.
- 8. Direct connection of the driver (PSU) to the LED lights is suggested. Not suitable for use in connecting additional drivers(PSU's).
- 9. To fulfill the requirements of the latest ERP regulations for lighting fixtures, this LED driver(PSU) can only be used with a switch; Not for permanent direct connection to AC main power.

■ Safety and EMC

| Safety Standards | EN61347-1, EN61347-2-13 | | |
|----------------------|--|--|--|
| Isolation Resistance | I/P-FG: 100M Ohms/500Vdc/25°C/70%RH | | |
| EMC Emission | Compliance to EN55015, EN61000-3-2 Class C (≥60% load) EN61000-3-3 | | |
| EMC Immunity | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024 | | |

Derating Curve



Efficiency vs Output







Tc vs Lifetime

Tc vs Lifetime



Timer Dimming



Case Temp(°C)

O-10V Analog Dimming

| Input Dimming Voltage | 0-12V | Normal |
|-----------------------|--------|---------|
| Input Source Current | 0-10mA | 47~63Hz |



Note:

- 1. If the dimming function is not used, all wire NC.
- 2. Io is actual output current and Ir is rated current without dimming control.
- 3. For the driver to operate properly, the load voltage must be maintained above the input voltage t, proximally 50% of the max. output voltage for any given mode.
- 4. The dimming signal is allowed to be less than 1V, when it for 0-1V, the connected LEDs may flicker. Keeping the dimming voltage greater than 1V in application is strongly recommended
- 5. Do not connect the GND of dimming(grey) to the output. Otherwise, the LED driver can not work normally.

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PWM Dimming





PWM Dimming: Pulse: High=5V, Low=2V Duty: 10-100% Fsw: 1-2KHz

Mechanical Diagram



5/7



Non-Dimming Wiring Diagram



*Requires a slow blow in-line fuse and housing on the input cable, contact the factory.



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*Product images are for illustrative purposes only and may vary from actual design. *Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.