



■ Features :

- Universal AC input / Full range
- Built-in constant current limiting circuit with adjustable OCP level
- Protections: Short circuit / Overload / Over voltage
- Fully isolated plastic case with IP64 level
- IP64 design for indoor or outdoor installations
- Optional dimming function : 1~10VDC(D type) or PWM controlled(P type)
- UL1310 Class 2 power unit
- Cooling by free air convection
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty

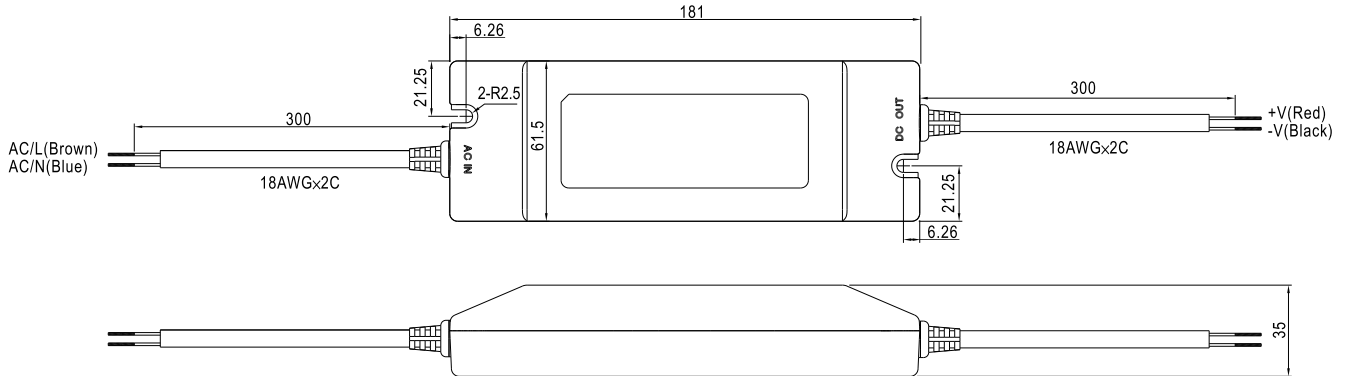
IP64 CE

SPECIFICATION

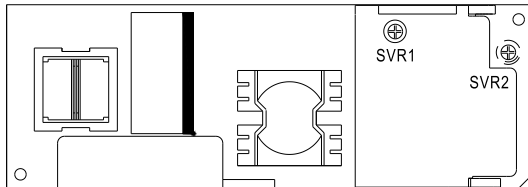
| MODEL | ELN-60-9 | ELN-60-12 | ELN-60-15 | ELN-60-24 | ELN-60-27 | ELN-60-48 | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------|-----------|------------------------------------------------|----------|
| OUTPUT | DC VOLTAGE | 9V | 12V | 15V | 24V | 27V | 48V |
| | LED OPERATION VOLTAGE Note.8 | 3 ~ 9V | 3 ~ 12V | 3 ~ 15V | 3 ~ 24V | 3 ~ 27V | 3 ~ 48V |
| | RATED CURRENT | 5A | 5A | 4A | 2.5A | 2.3A | 1.3A |
| | CURRENT RANGE | 0 ~ 5A | 0 ~ 5A | 0 ~ 4A | 0 ~ 2.5A | 0 ~ 2.3A | 0 ~ 1.3A |
| | RATED POWER | 45W | 60W | 60W | 60W | 62.1W | 62.5W |
| | RIPPLE & NOISE (max.) Note.2 | 120mVp-p | 120mVp-p | 150mVp-p | 150mVp-p | 200mVp-p | 250mVp-p |
| | VOLTAGE ADJ. RANGE Note.7 | 8.7 ~ 10.5V 10.8 ~ 13.2V 13.5 ~ 16.5V 21.6 ~ 26.4V 24.3 ~ 29.7V 43.2 ~ 52.8V | | | | | |
| | CURRENT ADJ. RANGE Note.7 | Can be adjusted by internal potential meter SVR1 | | | | | |
| | VOLTAGE TOLERANCE Note.3 | -25% ~ 3%. Can be adjusted by internal potential meter SVR2 | | | | | |
| | LINE REGULATION | ±5.0% | | | | | |
| | LOAD REGULATION | ±1.0% | | | | | |
| | INPUT | SETUP, RISE TIME Note.6 | 500ms, 30ms / 230VAC 1500ms, 30ms / 115VAC at full load | | | | |
| HOLD UP TIME (Typ.) | | 50ms/230VAC 16ms/115VAC at full load | | | | | |
| VOLTAGE RANGE Note.5 | | 90 ~ 264VAC | | | | | |
| FREQUENCY RANGE | | 47 ~ 63Hz | | | | | |
| EFFICIENCY (Typ.) | | 82% | 85% | 86% | 87% | 87% | 88% |
| AC CURRENT (Typ.) | | 1.2A/115VAC 0.7A/230VAC | | | | | |
| PROTECTION | INRUSH CURRENT(max.) | COLD STAR 60A/230VAC | | | | | |
| | LEAKAGE CURRENT | 0.25mA / 240VAC | | | | | |
| | OVER CURRENT | 95 ~ 110% | | | 130% max. | | |
| FUNCTION | OVER VOLTAGE | 11 ~ 13.5V | | 13.8 ~ 16V | | 17.5 ~ 21V 28 ~ 32V 31 ~ 35V 54 ~ 60V | |
| | DIMMING CONTROL (OPTIONAL) | 1 ~ 10VDC or PWM signal : 100Hz ~ 3KHz | | | | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +60°C (Refer to output load derating curve) | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC | SAFETY STANDARDS | Design refer to UL1310 Class 2, TUV EN60950-1, CAN/CSA C22.2 No. 223-M91(except for 48V), EN61347-2-13; IP64 approved | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:>100M Ohms/500VDC 25°C 70%RH | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2,-3 | | | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A | | | | | |
| OTHERS | MTBF | 603Khrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 181*61.5*35mm (L*W*H) | | | | | |
| | PACKING | 0.4Kg; 24pcs/11Kg/0.75CUFT | | | | | |
| NOTE | <ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC 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 a 0.1uF & 47uF parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the derating curve for more details. 5. The power supply is considered a component which will be installed a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. 7. Output voltage can be adjusted through the SVR1 on the PCB ; limit of output constant current level can be adjusted through the SVR2 on the PCB. 8. Constant current operation region is within the specified output voltage range above. This is the suitable operation region for LED related applications. | | | | | | |

Mechanical Specification

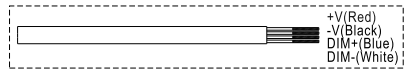
Case No.960A Unit:mm



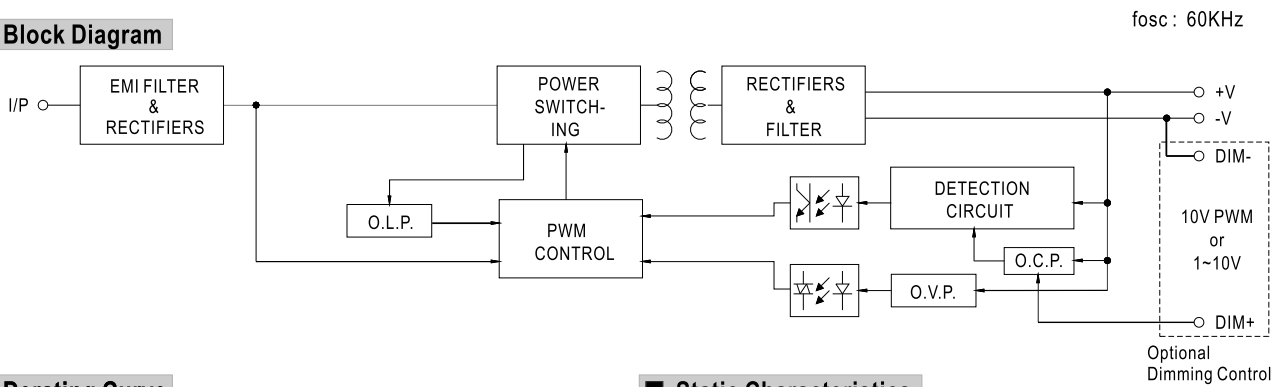
Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.



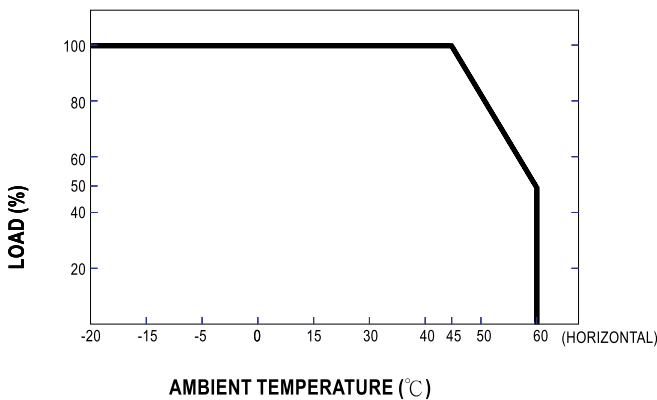
OUTPUT(with optional dimming function)



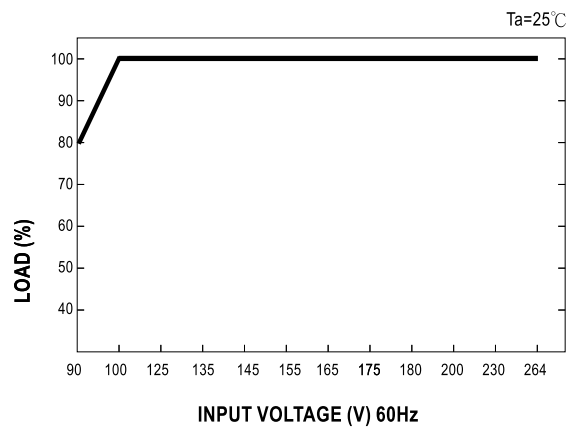
Block Diagram



Derating Curve



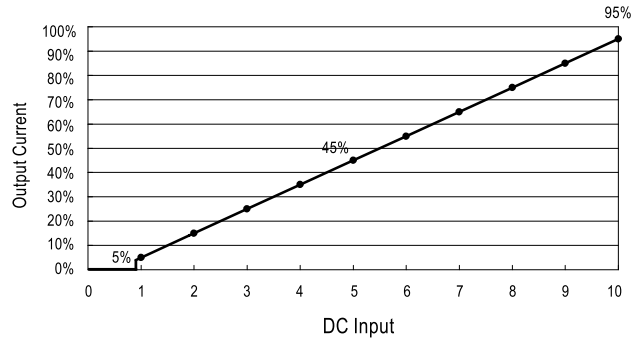
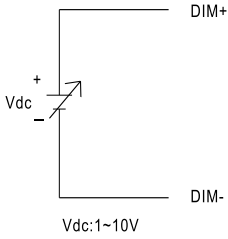
Static Characteristics



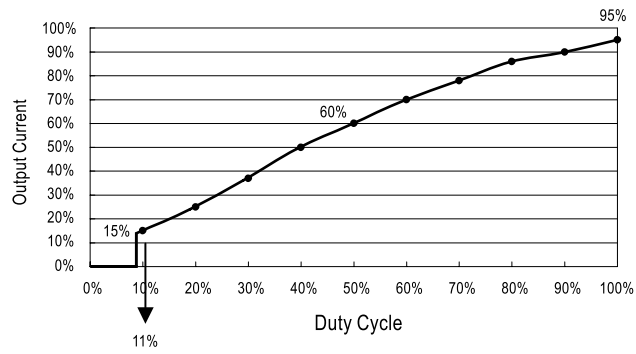
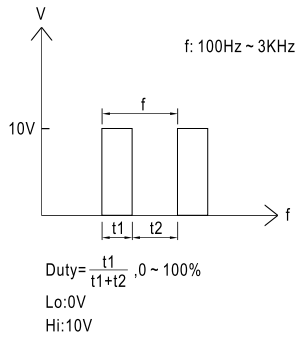
■ Dimming Control (Optional)

Level of output current can be adjusted through the dimming control function.

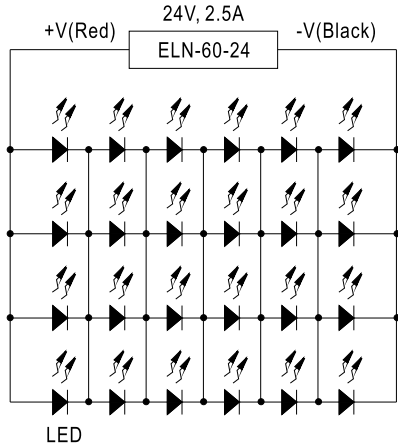
(1) 1~10V



(2) PWM

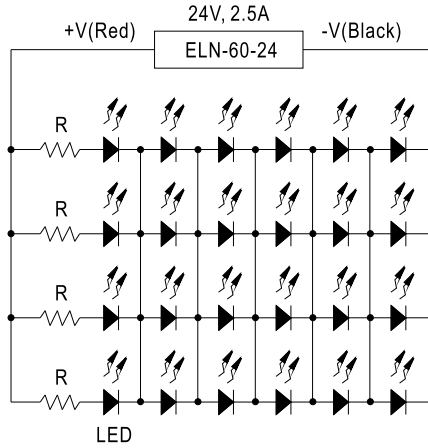


■ Recommend Application Deployment (24V)



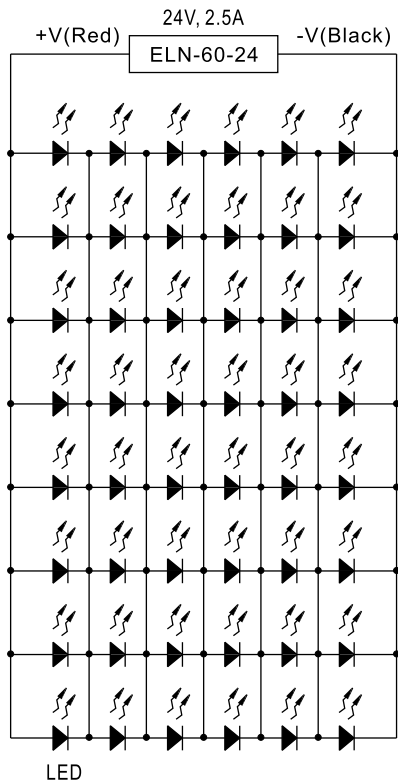
1 to 6 LEDs // 4 strips

This configuration is based on LED with the following parameters :
 $V_f = 3.0 \sim 3.5V$ $I_f = 600 \sim 700mA$



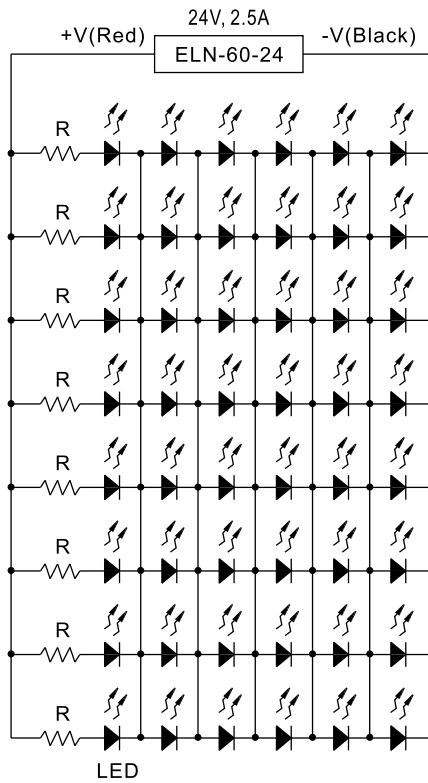
6 LEDs // 1 to 4 strips

This configuration is based on LED with the following parameters :
 $V_f = 3.0 \sim 3.5V$ $I_f = 600 \sim 700mA$
 $R = 10 \text{ ohm}, 10W$



1 to 6 LEDs // 8 strips

This configuration is based on LED with the following parameters :
 $V_f = 3.0 \sim 3.5V$ $I_f = 300 \sim 350mA$



6 LEDs // 1 to 8 strips

This configuration is based on LED with the following parameters :
 $V_f = 3.0 \sim 3.5V$ $I_f = 300 \sim 350mA$
 $R = 20 \text{ ohm}, 3W$