



Made in Italy


AV12150IP67 - AV24150IP67 - AV48150IP67

Power supply units and control gear



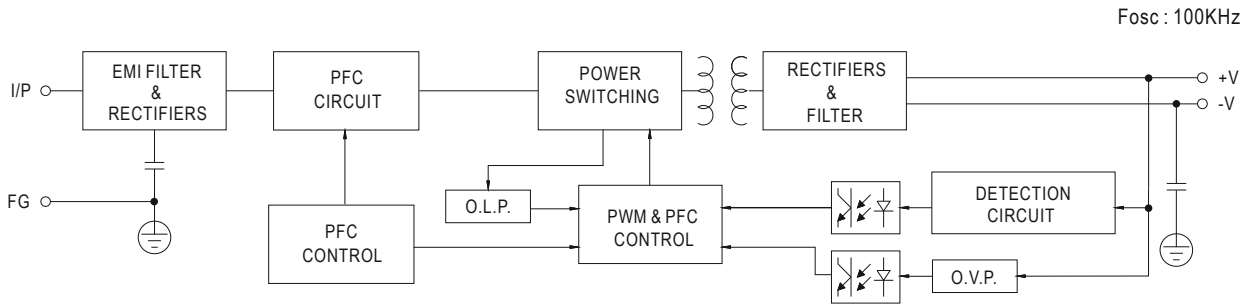
- **Features:**
- Universal AC input / Full range (up to 295VAC)
- Built-in active PFC function
- High efficiency up to 91%
- Protections: Short circuit / Over current / Over temperature
- Cooling by free air convection
- OCP point adjustable throughoutput cable or internal potentiometer
- IP67 design for indoor or outdoor installations
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- 3 years warranty

SPECIFICATION

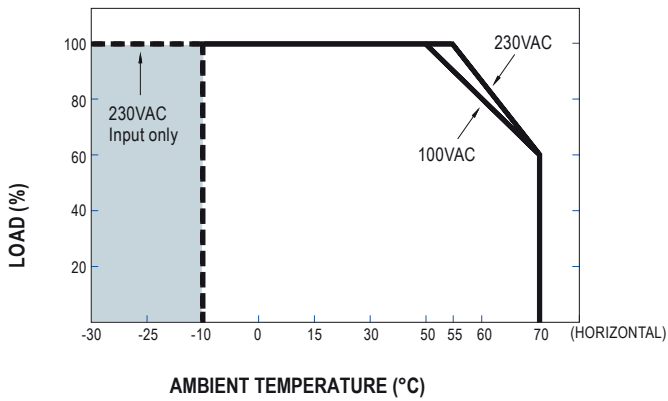
| MODEL | AV12150IP67 | AV24150IP67 | AV48150IP67 | |
|---------------------|---|--|-------------|------------|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | CONSTANT CURRENT REGION Note.4 | 9 ~ 12V | 18 ~ 24V | 36 ~ 48V |
| | RATED CURRENT | 11A | 6.3A | 3.2A |
| | RATED POWER | 132W | 151.2W | 153.6W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE Note.6 | 9 ~ 13V | 22 ~ 27V | 40 ~ 56V |
| | CURRENT ADJ. RANGE | Can be adjusted by internal potentiometer A type and C type only | | |
| | | 5.5 ~ 11A | 3.15 ~ 6.3A | 1.6 ~ 3.2A |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±1.0% | ±0.5% | ±0.5% |
| SETUP, RISE TIME | 3000ms, 80ms/115VAC 500ms, 80ms/230VAC at full load | | | |
| HOLD UP TIME (Typ.) | 50ms/230VAC 16ms/115VAC at full load | | | |
| INPUT | VOLTAGE RANGE Note.5 | 90 ~ 295VAC 127 ~ 417VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF ≥ 0.98/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.93/277VAC@full load (Please refer to "Power Factor Characteristic" curve) | | |
| | TOTAL HARMONIC DISTORTION | THD < 20% when output loading ≥ 75% at 115VAC/230VAC input and output loading ≥ 75% at 277VAC input | | |
| | EFFICIENCY (Typ.) | 88% | 90% | 91% |
| | AC CURRENT | 2A/115VAC 1A/230VAC 0.68A/277VAC | | |
| | INRUSH CURRENT (Typ.) | COLD START 65A (t _{width} = 595µs measured at 50% I _{peak}) at 230VAC | | |
| | MAX. No. of PSU on 16A CIRCUIT BREAKER | 3 units (circuit breaker of type B) / 5 units (circuit breaker of type C) at 230VAC | | |
| LEAKAGE CURRENT | < 1mA/240VAC | | | |
| PROTECTION | OVER CURRENT (Typ.) Note.4 | 95 ~ 108% Protection type: Constant current limiting, recovers automatically after fault condition is removed | | |
| | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 13.5 ~ 17V | 28 ~ 34V | 59 ~ 70V |
| | OVER TEMPERATURE | Shut down o/p voltage, re-power on to recover | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70°C (Refer to "Derating Curve") | | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | |
| | VIBRATION | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | | |
| SAFETY & EMC | SAFETY STANDARDS Note.7 | EN61347-1, EN61347-2-13 independent, TUV EN60950-1 | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 3.75KVAC I/P-FG: 2KVAC O/P-FG: 0.5KVAC | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC / 25°C / 70% RH | | |
| | EMC EMISSION | Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥ 75% load); EN61000-3-3 | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, EN55024; light industry level (surge 4KV), criteria A | | |
| OTHERS | MTBF | 303.7K hrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 222.2*68*38.8mm (L*W*H) | | |
| | PACKING | 1.0Kg | | |

| | |
|-------------|--|
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25 °C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf & 47µf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. Please refer to "DRIVING METHODS OF LED MODULE". Derating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. Safety and EMC design refer to EN60958-1, FCC part18. The power supply is considered a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must be re-qualify EMC Directive on the complete installation again. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can be used behind a switch without permanently connected to the mains. |
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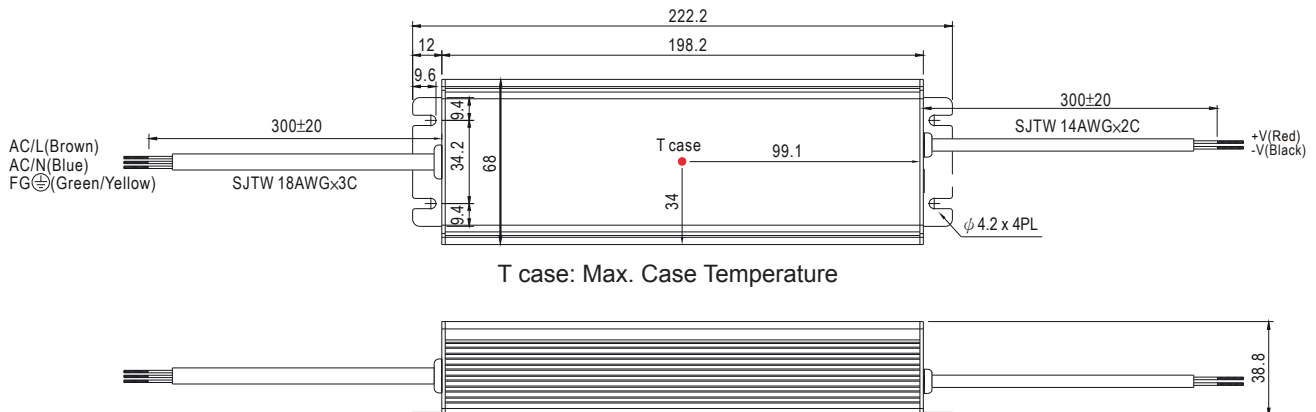
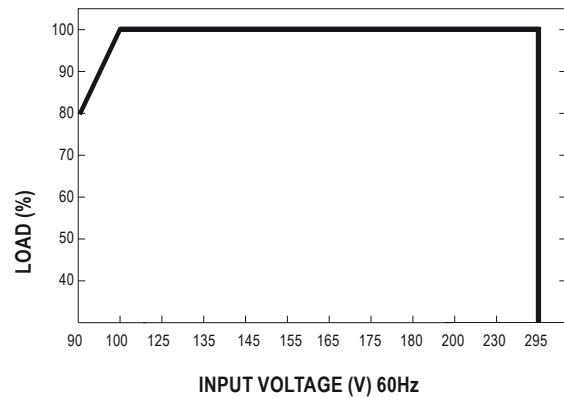
BLOCK DIAGRAM



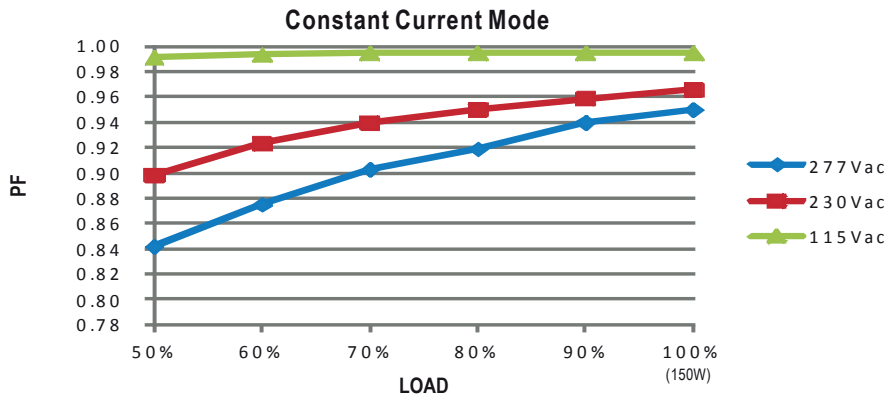
Derating curve



STATIC CHARACTERISTIC

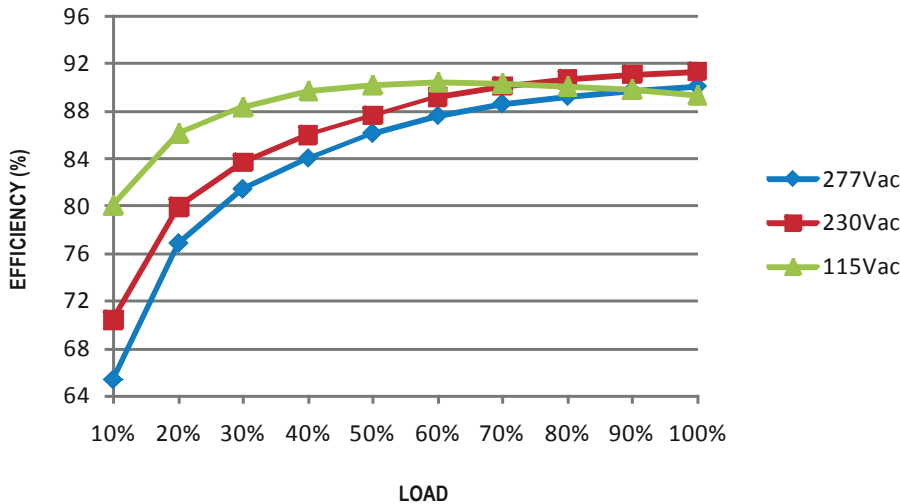


POWER FACTOR CHARACTERISTIC



EFFICIENCY vs LOAD (48V Model)

The power supply unit possess superior working efficiency that up to 91% can be reached in field applications.

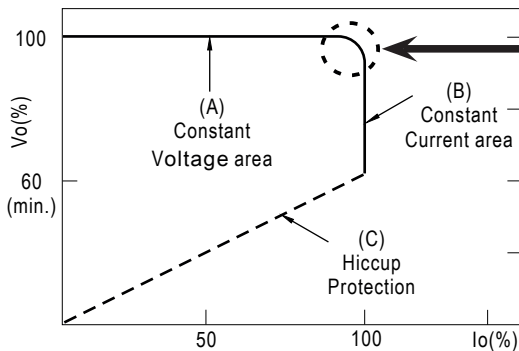


DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method “direct drive” and “with LED driver”.

A typical LED power supply may either work in “constant voltage mode (CV) or constant current mode (CC)” to drive the LEDs.

L&L’s LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems. Should there be any compatibility issues, please contact L&L.

Typical LED power supply I-V curve



L&L Luce&Light

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