# AV12040IP67 - AV24040IP67

rev. 01 11/05/2016

**Scheda tecnica -** ***Technical data sheet***

- **Features:**
- Constant voltage
- Plastic housing with Class II design
- Built-in active PFC function
- Class 2 power unit
- Fully encapsulated with IP67 level
- Typical lifetime>50000 hours
- 5 years warranty

SELV *IP67*

## SPECIFICATION

| MODEL | | AV12040IP67 | | | AV24040IP67 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 12V | | | 24V | | | | | |
| | CONSTANT CURRENT REGION Note.2 | 7.2 ~12V | | | 14.4 ~ 24V | | | | | |
| | RATED CURRENT | 3.34A | | | 1.67A | | | | | |
| | RATED POWER Note.5 | 40.08W | | | 40.08W | | | | | |
| | RIPPLE & NOISE (max.) Note.3 | 150mVp-p | | | 150mVp-p | | | | | |
| | VOLTAGE TOLERANCE Note.4 | ±4.0% | | | ±4.0% | | | | | |
| | LINE REGULATION | ±0.5% | | | ±0.5% | | | | | |
| | LOAD REGULATION | ±2.0% | | | ±0.5% | | | | | |
| | SETUP, RISE TIME Note.6 | 1000ms, 80ms / 115VAC 500ms, 80ms / 230VAC | | | | | | | | |
| | HOLD UP TIME (Typ.) | 16ms/230VAC 16ms/115VAC | | | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 90 ~ 305VAC 127 ~ 431VDC<br>(Please refer to "STATIC CHARACTERISTIC" section) | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | |
| | POWER FACTOR | PF≧0.97/115VAC, PF≧0.95/230VAC, PF≧0.92/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | | | | | | | | |
| | TOTAL HARMONIC DISTORTION | THD< 20%(@load≧60%/115VC,230VAC; @load≧75%/277VAC)<br>(Please refer to "TOTAL HARMONIC DISTORTION(THD)" section) | | | | | | | | |
| | EFFICIENCY (Typ.) | 84% | | | 87% | | | | | |
| | AC CURRENT | 0.6A / 115VAC 0.3A / 230VAC 0.25A/277VAC | | | | | | | | |
| | INRUSH CURRENT(Typ.) | COLD START 50A(twidth=210μs measured at 50% Ipeak) at 230VAC; Per NEMA 410 | | | | | | | | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 12 units (circuit breaker of type B) / 20 units (circuit breaker of type C) at 230VAC | | | | | | | | |
| | LEAKAGE CURRENT | <0.75mA / 240VAC | | | | | | | | |
| PROTECTION | OVER CURRENT | 95 ~ 108% | | | | | | | | |
| | | Constant current limiting, recovers automatically after fault condition is removed | | | | | | | | |
| | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | |
| | OVER VOLTAGE | 15 ~ 17V | | | 28 ~ 35V | | | | | |
| | | Shut down and latch off o/p voltage, re-power on to recover | | | | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, re-power on to recover | | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | Tcase=-40 ~ +80°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section) | | | | | | | | |
| | MAX. CASE TEMP. | Tcase=+80°C | | | | | | | | |
| | 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.8 | ENEC EN61347-1, EN61347-2-13 independent, EN62384, IP67,<br>design refer to TUV EN60950-1 | | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | | | | | | | | |
| | EMC EMISSION Note.8 | Compliance to EN55015,EN61000-3-2 Class C (@load≧60%) ; EN61000-3-3 | | | | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge immunity Line-Line 2KV) | | | | | | | | |
| OTHERS | MTBF | 438.8Khrs min. MIL-HDBK-217F (25°C) | | | | | | | | |
| | DIMENSION | 162.5*43*32mm (L*W*H) | | | | | | | | |
| | PACKING | 0.44Kg; 32pcs/15.08Kg/0.93CUFT | | | | | | | | |

**NOTE**

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25 °C of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. Ripple & noise are measured at 20MHz of bandwith by using a 12" twisted pair-wire terminated with a 0.1μf & 47μf parallel capacitor.
4. Tolerance: includes set up tolerance, line regulation and load regulation.
5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERIC" sections for details.
6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
7. The driver 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.
8. This series meets the typical life expectancy of >50000 hours of operation when Tcase, particularly tc point (or TMP, per DLC), is about 75 °C or less.

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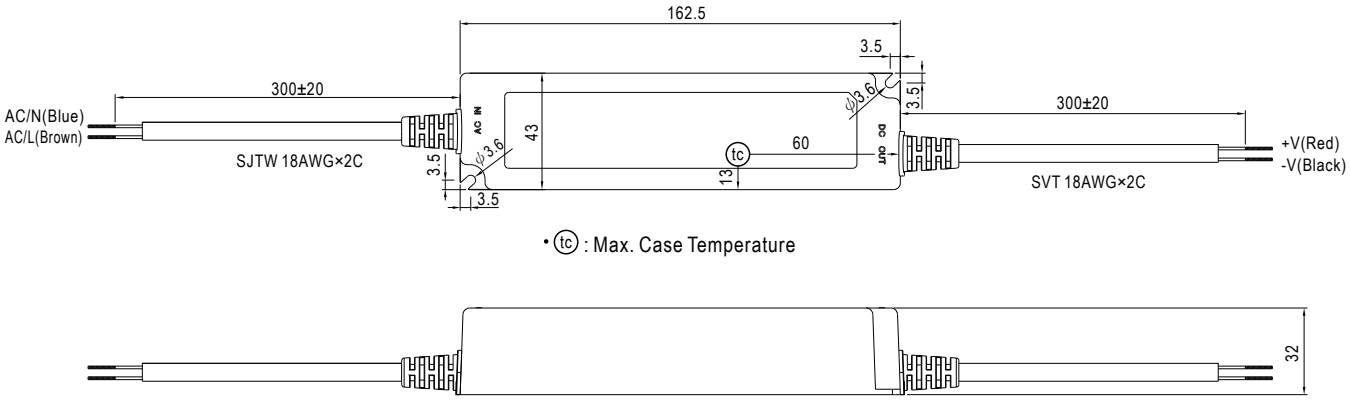
## ■ MECHANICAL SPECIFICATION

Unit:mm

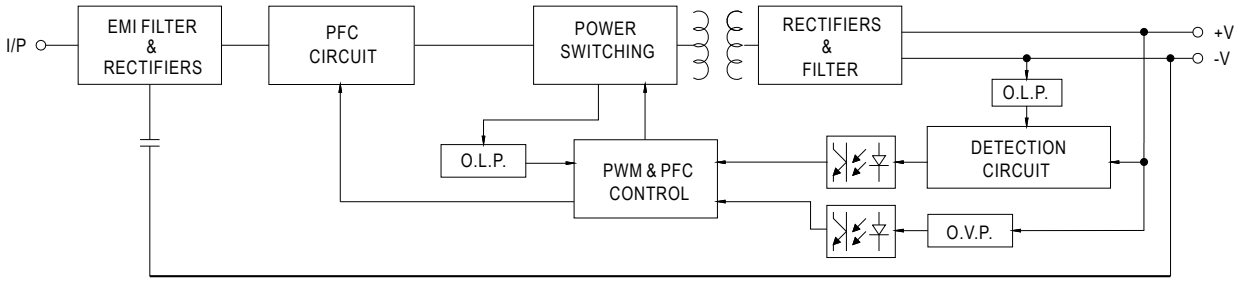



• tc : Max. Case Temperature

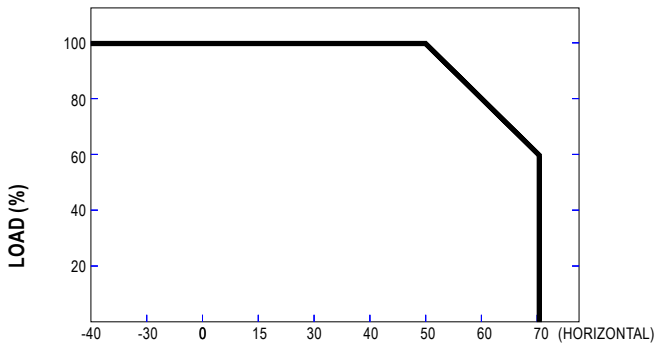



## ■ BLOCK DIAGRAM

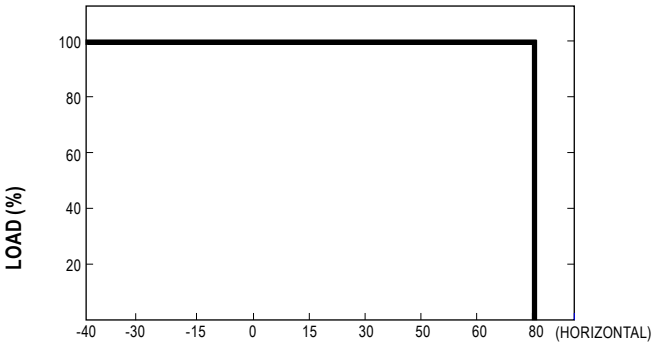
fosc : 100KHz




## ■ OUTPUT LOAD vs TEMPERATURE

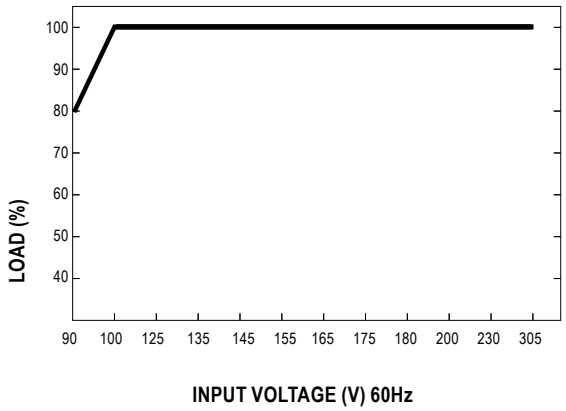



**AMBIENT TEMPERATURE,Ta (°C)**




**Tcase (°C)**

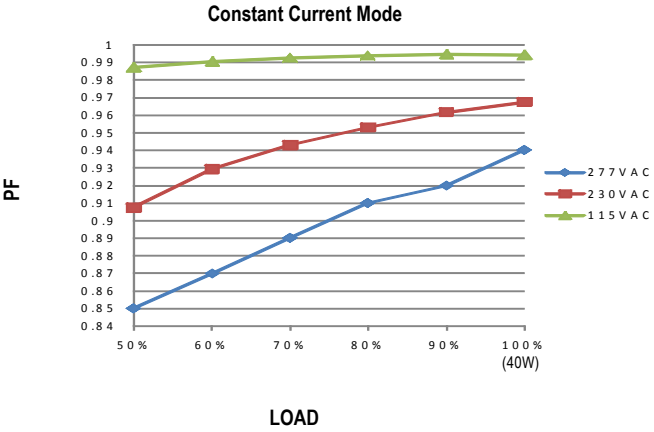
## ■ STATIC CHARACTERISTIC




※ De-rating is needed under low input voltage.

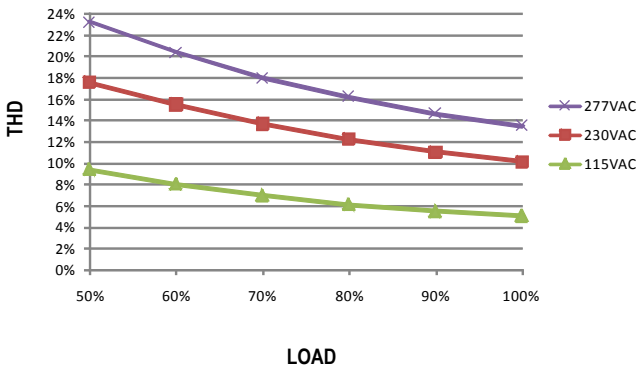
## ■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 70℃




## ■ TOTAL HARMONIC DISTORTION (THD)

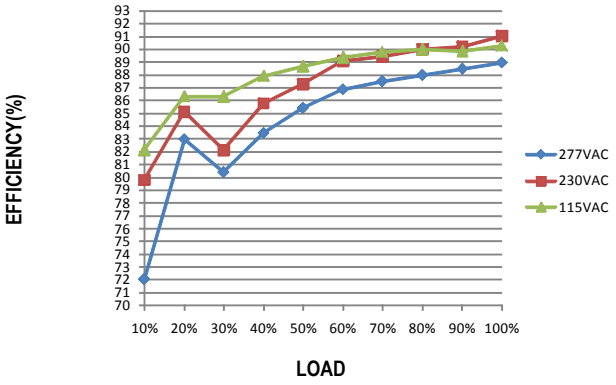
※ 48V Model, Tcase at 70℃




## ■ EFFICIENCY vs LOAD

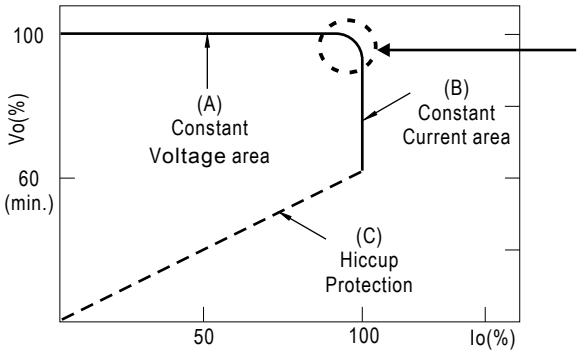
LPF-40 series possess superior working efficiency that up to 90% can be reached in field applications.

※ 48V Model, Tcase at 70℃




## ■ DRIVING METHODS OF LED MODULE

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.




Typical output current normalized by rated current (%)

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 MEAN WELL.

## ■ LIFE TIME