

AV12040IP67 - AV24040IP67

Scheda tecnica - Technical data sheet



■ Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 90%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- Fully encapsulated with IP67 level (Note.6)
- Class II power unit, no FG
- Class 2 power unit
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 5 years warranty



SPECIFICATION

MODEL		AV12040IP67	AV24040IP67					
OUTPUT	DC VOLTAGE	12V	24V					
	CONSTANT CURRENT REGION Note.4	7.2 ~ 12V	14.4 ~ 24V					
	RATED CURRENT	3.34A	1.67A					
	RATED POWER	40.08W	40.08W					
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p					
	VOLTAGE TOLERANCE Note.3	±4.0%	±4.0%					
	LINE REGULATION	±0.5%	±0.5%					
	LOAD REGULATION	±2.0%	±0.5%					
	SETUP, RISE TIME Note.7	1000ms, 80ms / 115VAC at full load		500ms, 80ms / 230VAC				
HOLD UP TIME (Typ.)	16ms/230VAC	16ms/115VAC at full load						
INPUT	VOLTAGE RANGE Note.5	90 ~ 305VAC	127 ~ 431VDC					
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	PF>0.97/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load (Please refer to "Power Factor Characteristic" curve)						
	EFFICIENCY (Typ.)	84%		87%			90%	
	AC CURRENT (Typ.)	0.6A / 115VAC	0.3A / 230VAC	0.25A / 277VAC				
	INRUSH CURRENT (Typ.)	COLD START 50A (width=210µs measured at 50% peak) at 230VAC						
LEAKAGE CURRENT	<0.75mA / 240VAC							
PROTECTION	OVER CURRENT 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	15 ~ 17V		28 ~ 35V		41 ~ 49V		54 ~ 63V
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.	-40 ~ +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)						
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes						
	SAFETY STANDARDS Note.6	UL8750, CSA C22.2 No. 250.0-08(except for 48V, 54V), IEC EN61347-1, EN61347-2-13 independent, EN62384, IP67, J61347-1, J61347-2-13 approved ; design refer to UL60950-1, 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	Compliance to EN55015, EN61000-3-2 Class C (≥60% load) ; EN61000-3-3						
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level(surge 2KV), criteria A						
	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	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load 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 check the static characteristics for more details. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. The power supply is considered as 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 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 only be used behind a switch without permanently connected to the mains. 							

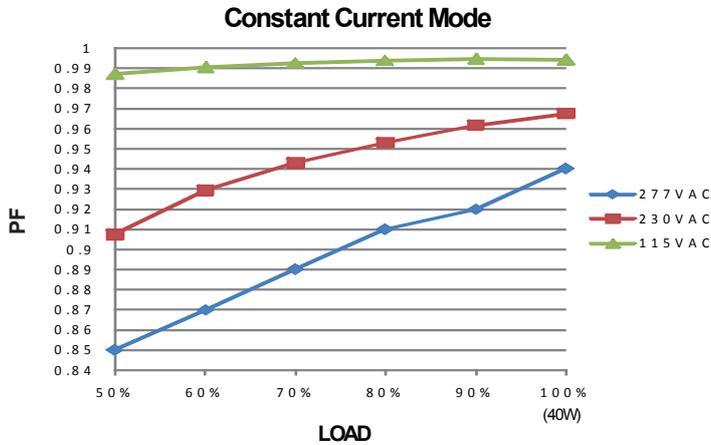
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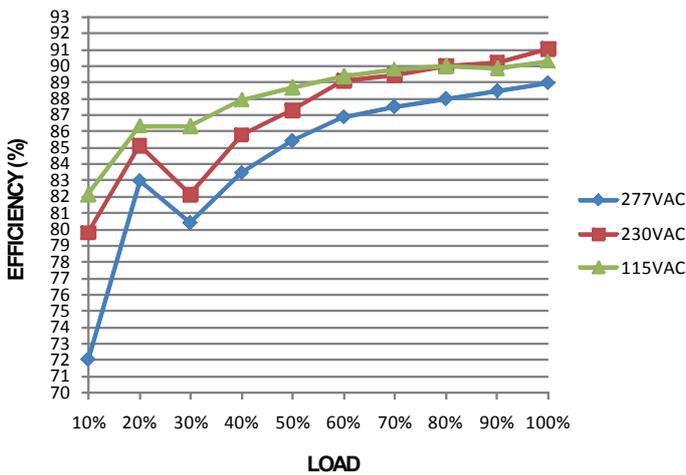
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Power Factor Characteristic



EFFICIENCY vs LOAD (48V Model)

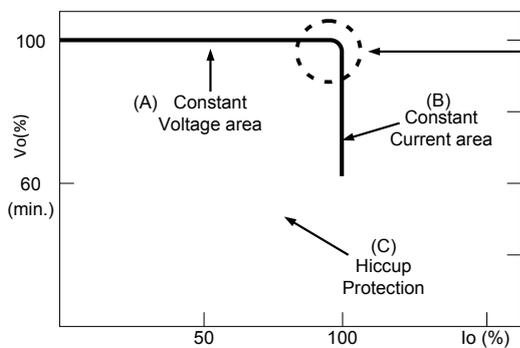
LPF-40 series possess superior working efficiency that up to 90% can be reached in field applications.



DRIVING METHODS OF LED MODULE

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

Atypical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.