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Model: _____ Date: _____
Accessories: _____
Job Name: _____ Type: _____

XFMR-277-XX-60

60W · 277V SINGLE OUTPUT LED POWER SUPPLY

FEATURES

- Universal AC input / Full range (Up to 295VAC)
- Protections: short circuit/overload/over voltage/over temperature
- Built-in constant current limiting circuit with adjustable OCP level
- IP64 design for indoor or outdoor installations
- Built-in active PFC function
- Pass LPS
- Class II power unit
- Cooling by free air convection
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications ^{Note: 1}
- Compliance to worldwide safety regulations for lighting
- Suitable for dry/damp locations
- 2 year warranty



SPECIFICATION

	Model	XFMR-277-12-60	XFMR-277-24-60
OUTPUT	DC VOLTAGE	12V	24V
	LED OPERATION VOLTAGE ^{Note: 5}	8.4 ~ 12V	16.8 ~ 24V
	RATED CURRENT	5A	2.5A
	CURRENT RANGE	0 ~ 5A	0 ~ 2.5A
	RATED POWER	60W	60W
	RIPPLE & NOISE (max.) ^{Note: 1}	2Vp-p	2.7Vp-p
	VOLTAGE ADJ. RANGE ^{Note: 4}	11.5 ~ 13V	24 ~ 26V
		Can be adjusted by internal potentiometer SVR1	
	CURRENT ADJ. RANGE ^{Note: 4}	3% ~ -25% Can be adjusted by internal potentiometer SVR2	
	VOLTAGE TOLERANCE ^{Note: 2}	±10%	
	LINE REGULATION	±3.0%	
	LOAD REGULATION	±5.0%	
SETUP TIME	500ms/230VAC 3000ms/115VAC at full load		
INPUT	VOLTAGE RANGE ^{Note: 3}	90 ~ 295VAC	127 ~ 417VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR	PF>0.92/115VAC, PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)	
	EFFICIENCY(Typ.)	85%	87%
	AC CURRENT	0.8A/115VAC	0.4A/230VAC 0.3A/277VAC
	INRUSH CURRENT(max.)	COLD START 35A(twidth=25µ s measured at 50% Ipeak) at 230VAC	
	LEAKAGE CURRENT	<0.75mA/240VAC	
PROTECTION	OVER CURRENT	95 ~ 110% rated output power	
		Constant current limiting, recovers automatically after fault condition is removed	
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	13.8 ~ 16V	28 ~ 32V
		Shut off o/p voltage, re-power on to recover	
OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down		

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATION (cont.)

	Model	XFMR-277-12-60	XFMR-277-24-60
ENVIRONMENT	WORKING TEMP.	-22 ~ +122°F (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +176°F , 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/°F (0 ~ 122°F)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC	SAFETY STANDARDS	UL879, UL1310, UL8750, CSA C22.2 No. 207-M89, TUV EN61347-1, EN61347-2-13 independent, CAN/CSA C22.2 No. 223-M91, CSA C22.2 No. 250.0-08, IP64, J61347-1, J61347-2-13 approved, design refer to UL60950-1	
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 77°F/ 70% RH	
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥75% load) ; EN61000-3-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level, criteria A	
OTHERS	MTBF	497.8Khrs min. MIL-HDBK-217F(77°F)	
	DIMENSIONS	7.12in * 2.4in * 1.3in (L*W*H)	
	PACKING	1.1lbs; 24pcs/28.6lbs/0.75CUFT	

NOTES

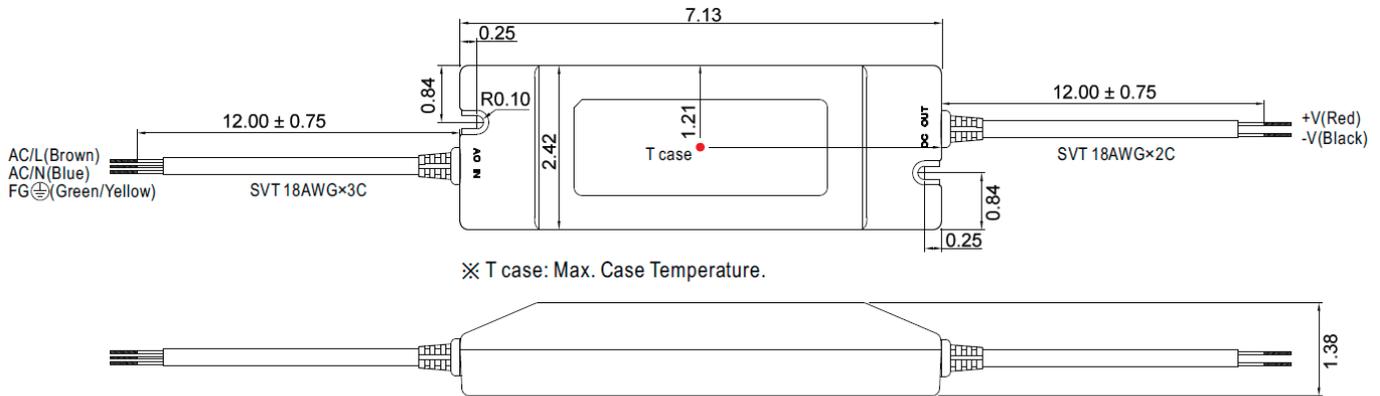
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47 uf parallel capacitor.
- Tolerance: includes set up tolerance, line regulation and load regulation.
- Derating: may be needed under low input voltage, please check the static characteristic for more details.
- 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.
- Please refer to the "DRIVING METHODS OF LED MODULE"

ATTENTION

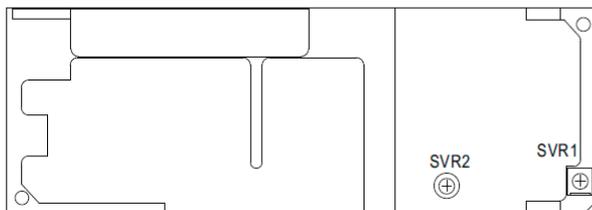
- All parameters NOT specifically mentioned are measured at 230VAC input, rated load and 77°F ambient temperature.
- The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.
- 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.

MECHANICAL SPECIFICATION

CASE NO. 960A UNITS: INCHES

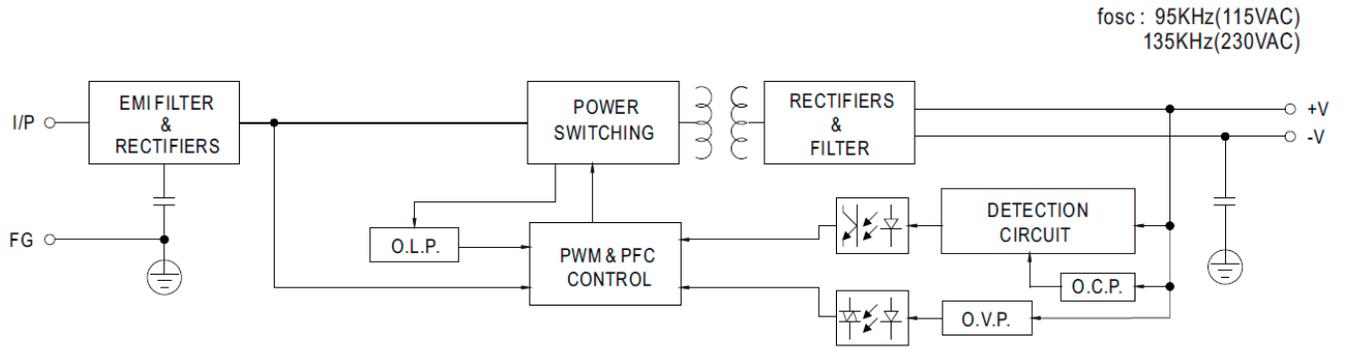


Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.

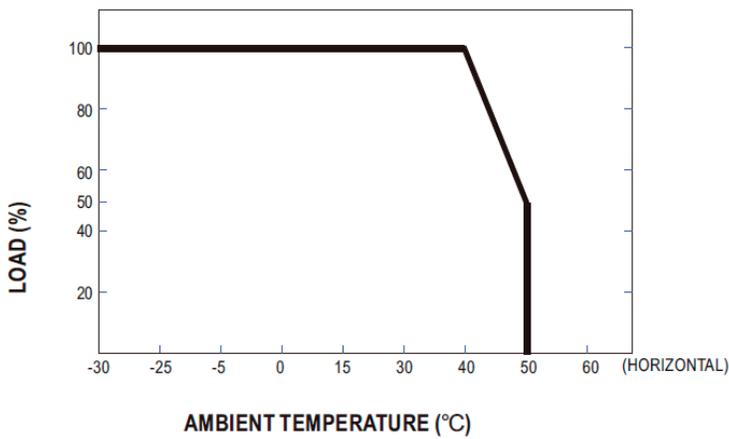


SVR1	Output voltage adjustment
SVR2	Output current adjustment

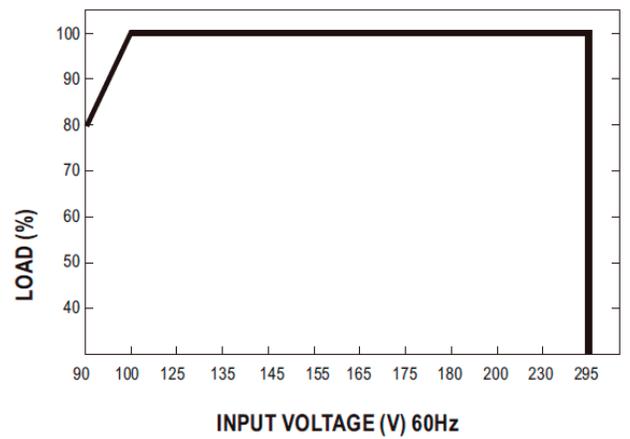
BLOCK DIAGRAM



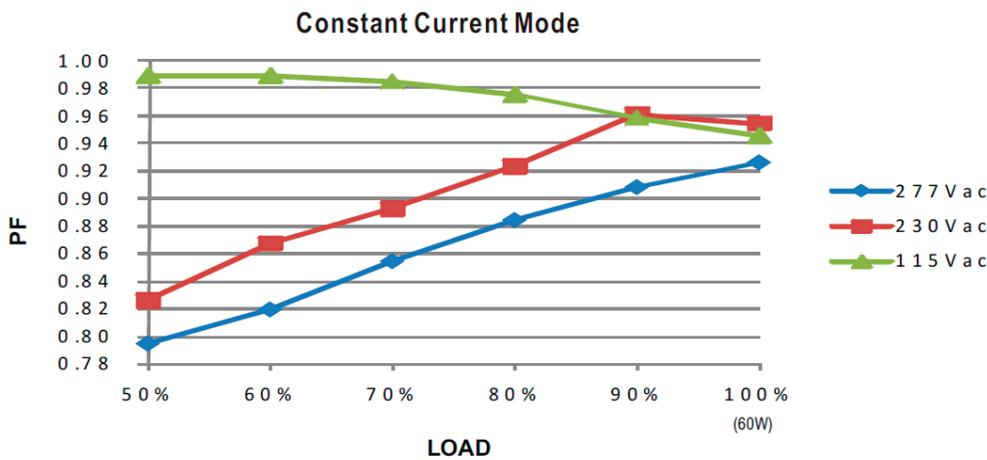
DERATING CURVE



STATIC CHARACTERISTICS

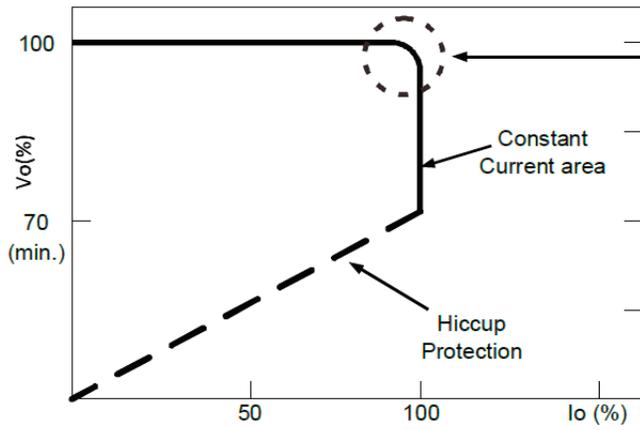


POWER FACTOR CHARACTERISTIC



DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



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 factory.

Typical LED power supply I-V curve