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F	EΑ	TL.	IR	F.S

- Universal AC input / Full range (Up to 277VAC)
- Protections: short circuit/overload/over voltage/over temperature
- Built-in constant current limiting circuit with adjustable OCP
- IP64 design for indoor or outdoor installations
- Pass LPS
- Class II power unit, no FG
- 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

Model:	Date:
Accessories:	
Job Name:	Type:

XFMR-277-XX-20

20W - 277V SINGLE OUTPUT LED POWER SUPPLY



SPECIFICATION

	Model	XFMR-277-12-20	XFMR-277-24-20		
	DC VOLTAGE	12V	24V		
	LED OPERATION VOLTAGE Note: 4	9 ~ 12V	18 ~ 24V		
	RATED CURRENT	1.6A	0.8A		
	CURRENT RANGE	0 ~ 1.6A	0 ~ 0.8A		
5	CURRENT ADJ. RANGE	75% ~ 10	75% ~ 100%		
OUTPUT	RATED POWER	19.2W	19.2W		
ō	RIPPLE & NOISE (max.) Note: 1	2.5Vp-p	3.0Vp-p		
	VOLTAGE TOLERANCE Note: 2	±10%	±10%		
	LINE REGULATION	±3.0%	±3.0%		
	LOAD REGULATION	±10.09	±10.0%		
	SETUP TIME	2300ms/230VAC, 500ms, 300	2300ms/230VAC, 500ms, 3000ms/115VAC at full load		
	VOLTAGE RANGE Note: 3	90 ~ 277VAC	90 ~ 277VAC 127 ~ 392VDC		
	FREQUENCY RANGE	47 ~ 63	47 ~ 63Hz		
5	POWER FACTOR		PF 0.9 at 75~100% load, 115VAC/230VAC; PF 0.9 at 85~100% load 277VAC (Please refer to "Power Factor Characteristic" curve)		
INPUT	EFFICIENCY(Typ.)	80%	82%		
	AC CURRENT	0.4A/115VAC 0.2A/230V	AC 0.15A/277VAC		
	INRUSH CURRENT(max.)	40A/230\	40A/230VAC		
	LEAKAGE CURRENT	<0.5mA/24	0VAC		
	OVER CURRENT	95 ~ 110% rated output power			
_		Constant current limiting, recovers automatically after fault condition is remove			
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically	Hiccup mode, recovers automatically after fault condition is removed		
띮		14~16V	27 ~ 34V		
<u>S</u>	OVER VOLTAGE	Shut down o/p voltage, clamping by zener diode			
<u>. </u>	OVER TEMPERATURE	230°F ± 18°F (TSW1)			
		Shut down o/p voltage, recovers automatically after temperature goes down			

SPECIFICATION (cont.)

	Model	XFMR-277-12-20	XFMR-277-24-20		
ENVIRONMENT	WORKING TEMP.	-22 ~ +140°F (Refer to "Derating curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +176°F , 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.06%°F (32 ~ 122°F)			
N	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	IEC61347-1, IEC61347-2-13, TUV EN61347-1, EN61347-2-13, meets UL8750, meets CSA C22.2 No. 250.0-08, J61347-1, J61347-2-13, IP64 approved			
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC			
	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	643.6Khrs min. MIL-HDBK-217F(77°F)	643.6Khrs min. MIL-HDBK-217F(77°F)		
	DIMENSIONS	5.84in * 1.5in * 1.1in (L*W*H)			
	PACKING	0.396lbs; 60pcs/28.2lbs/0.9CUFT	0.396lbs; 60pcs/28.2lbs/0.9CUFT		

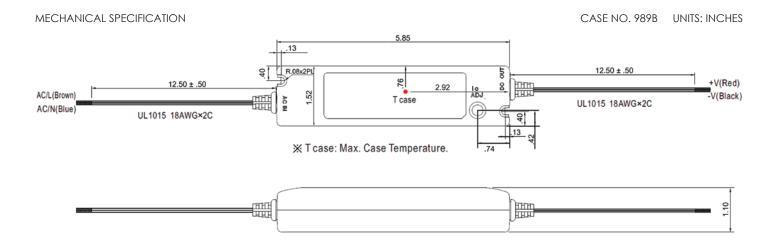
NOTES

- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uf & 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.

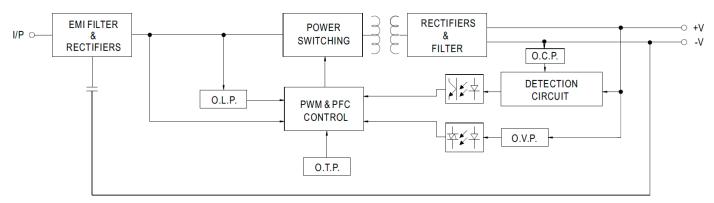
 Constant current operation region is within 75% 100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirms special electrical requirements for some specific system design.

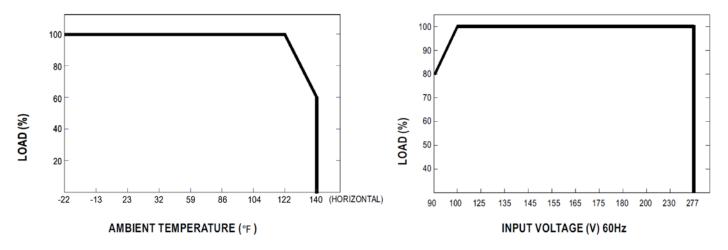
ATTENTION

- 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.



BLOCK DIAGRAM

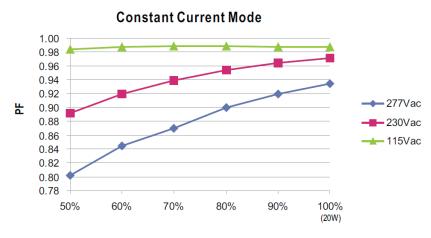




POWER FACTOR CHARACTERISTIC

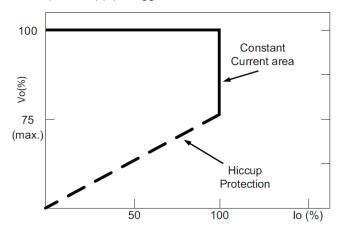
Power factor will be higher than 0.9 when output loading is 75% or higher.

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DRIVING METHODS OF LED MODULE

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



Typical LED power supply I-V curve

