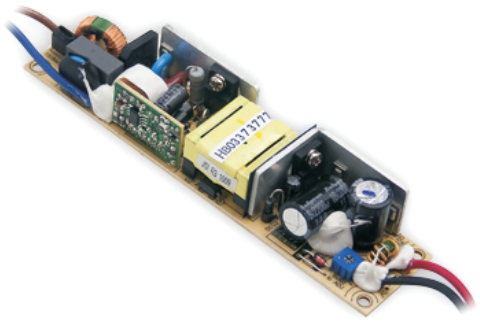
MEAN WELL

20W Single Output LED Power Supply

PLP-20 series



■ Features :

- Universal AC input / Full range(up to 277VAC)
- Protections:Short circuit/Over current/Over voltage/Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit with adjustable OCP level
- Built-in active PFC function
- Small and compact size
- 100% full load burn-in test
- High reliability,low cost
- Suitable for built-in applications of LED lighting
- 2 years warranty

SPECIFICATION

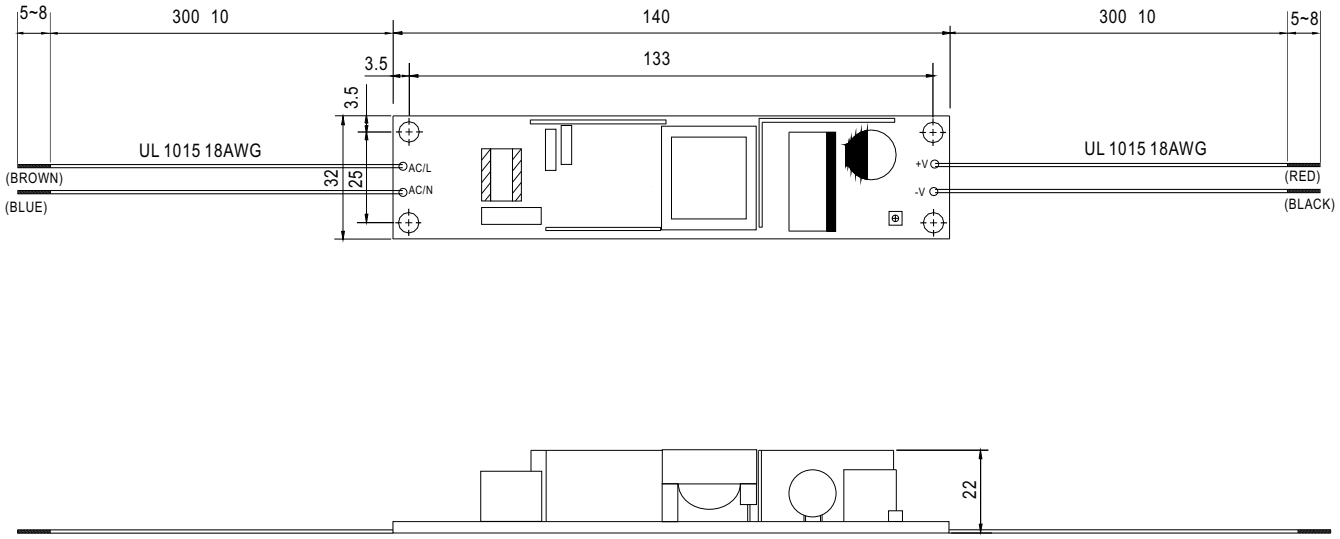
MODEL		PLP-20-12	PLP-20-18	PLP-20-24	PLP-20-36	PLP-20-48
OUTPUT	DC VOLTAGE	12V	18V	24V	36V	48V
	LED OPERATION VOLTAGE Note.5	9 ~ 12V	13.5 ~ 18V	18 ~ 24V	27 ~ 36V	36 ~ 48V
	RATED CURRENT	1.6A	1.1A	0.8A	0.55A	0.42A
	CURRENT RANGE	0 ~ 1.6A	0 ~ 1.1A	0 ~ 0.8A	0 ~ 0.55A	0 ~ 0.42A
	CURRENT ADJ. RANGE	75% ~ 100%				
	RATED POWER	19.2W	19.8W	19.2W	19.8W	20.2W
	RIPPLE & NOISE (max.) Note.2	2.5Vp-p	3.0Vp-p	3.0Vp-p	3.0Vp-p	3.8Vp-p
	VOLTAGE TOLERANCE Note.3	10%				
	LINE REGULATION	3.0%				
	LOAD REGULATION	10%				
	SETUP, RISE TIME	2300ms, 200ms / 230VAC 3000ms, 200ms / 115VAC at full load				
INPUT	VOLTAGE RANGE Note.4	90 ~ 277VAC 127~392VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	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)				
	EFFICIENCY(Typ.)	80%	81%	82%	83%	83.5%
	AC CURRENT	0.4A/115VAC 0.2A/230VAC 0.15A/277VAC				
	INRUSH CURRENT(max.)	40A/230VAC				
	LEAKAGE CURRENT	0.5mA / 240VAC				
PROTECTION	OVER CURRENT Note.5	95 ~ 110%				
		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	14 ~ 16V	19 ~ 22V	27 ~ 34V	41 ~ 46V	54 ~ 60V
		Protection type : Shut off o/p voltage, clamping by zener diode				
	OVER TEMPERATURE	110℃ 10℃ (TSW1)				
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	WORKING TEMP.	-30 ~ +60℃ (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	0.06%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS	TUV EN61347-1, EN61347-2-13, UL8750 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC				
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC / 25℃/ 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 (25℃)				
	DIMENSION	140*32*22(L*W*H)				
	PACKING	0.12kg;60pcs/9.2kg/0.62CUFT				

NOTE

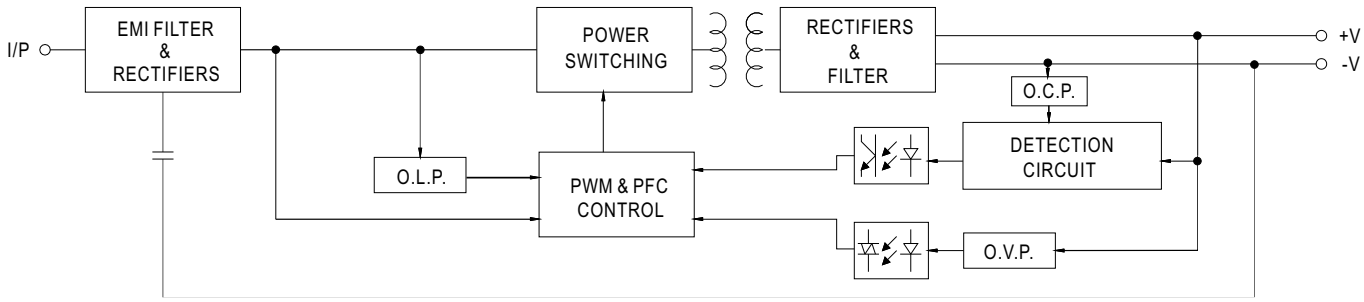
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltage, please check the static characteristic for more details.
5. Constant current operation region is within 75% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
6. 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.
7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

■ Mechanical Specification

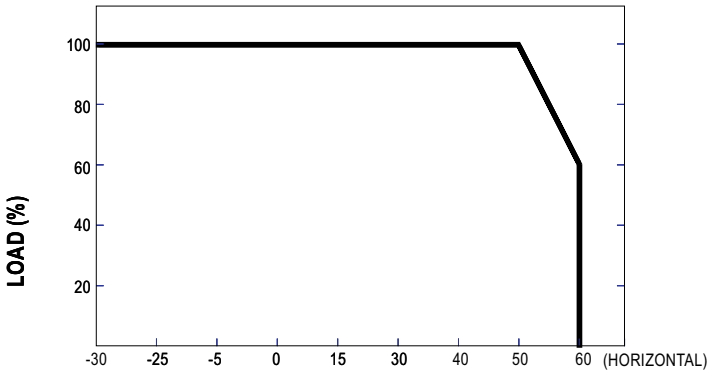
Unit:mm



■ Block Diagram

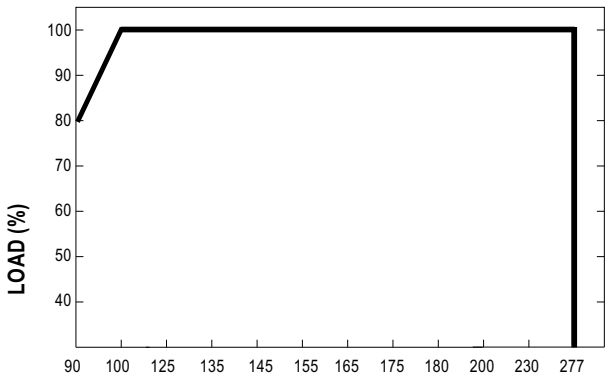


■ Derating Curve



AMBIENT TEMPERATURE (℃)

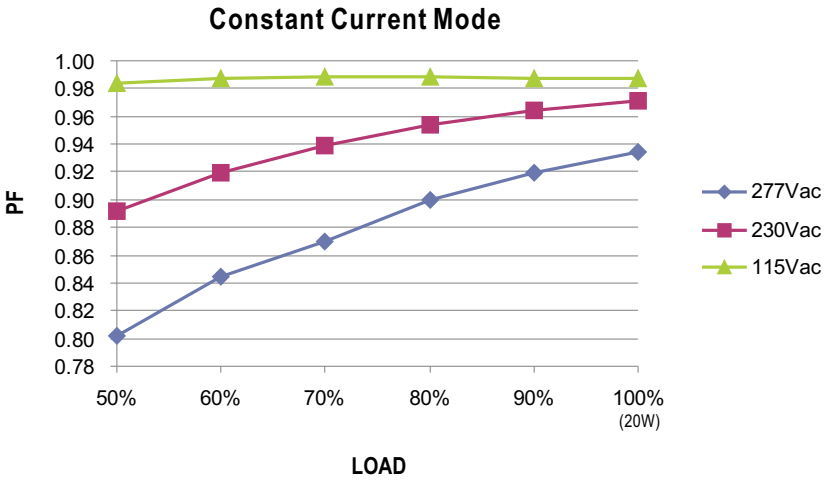
■ Static Characteristics



INPUT VOLTAGE (V) 60Hz

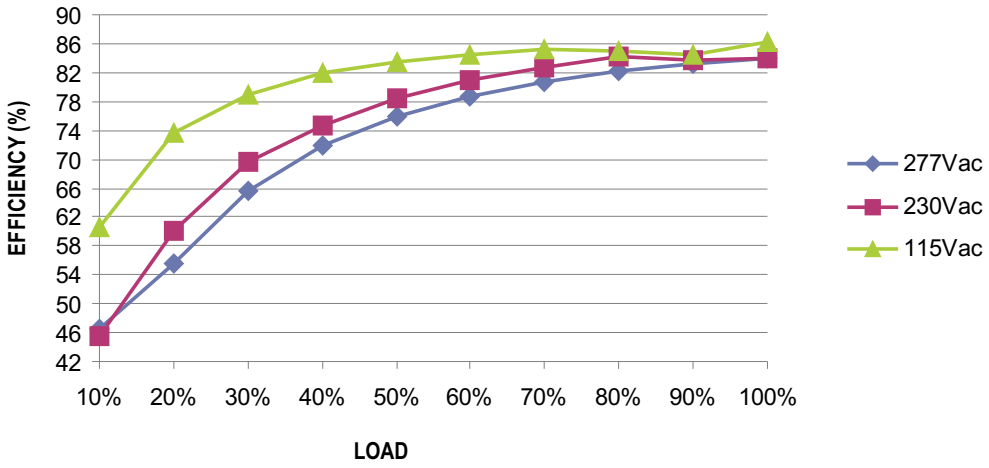
Power Factor Characteristic

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



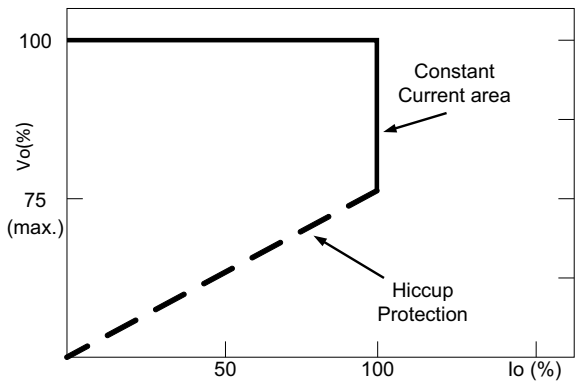
EFFICIENCY vs LOAD (48V Model)

PLP-20 series possess superior working efficiency that up to 83.5% can be reached in field applications.



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