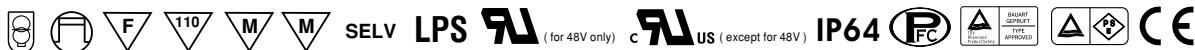




■ Features :

- Universal AC input / Full range (up to 295VAC)
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit with adjustable OCP level
- Fully isolated plastic case with IP64 level
- Built-in active PFC function
- IP64 design for indoor or outdoor installations
- Pass LPS
- UL1310 Class 2 power unit
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications (Note.2)
- Compliance to worldwide safety regulations for lighting
- 2 years warranty

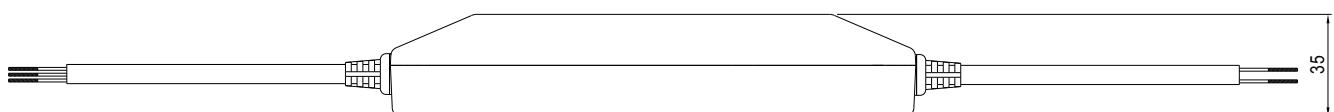
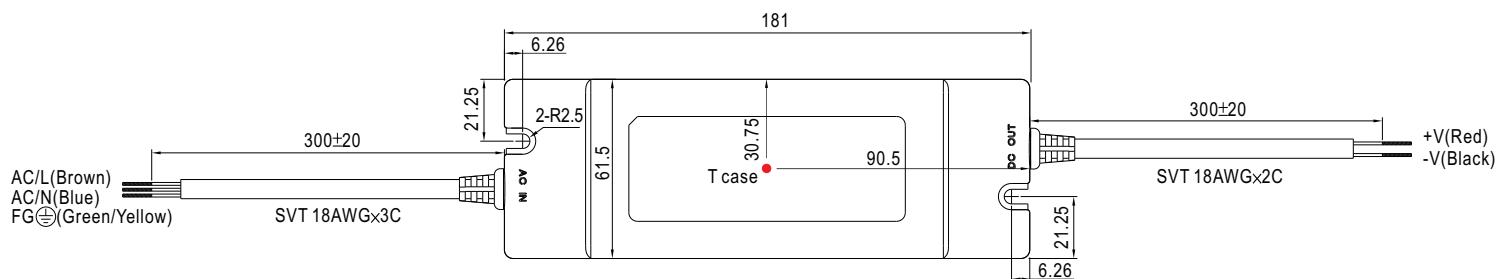


SPECIFICATION

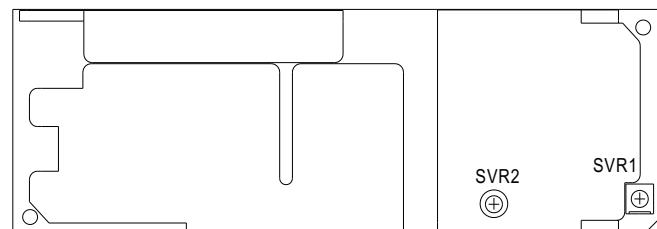
MODEL	PLN-45-12	PLN-45-15	PLN-45-20	PLN-45-24	PLN-45-27	PLN-45-36	PLN-45-48	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	27V	36V	
	CONSTANT CURRENT OPERATION VOLTAGE Note.6	9 ~ 12V	11.25 ~ 15V	15 ~ 20V	18 ~ 24V	20.25 ~ 27V	27 ~ 36V	
	RATED CURRENT	3.8A	3A	2.3A	1.9A	1.7A	1.25A	
	CURRENT RANGE	0 ~ 3.8A	0 ~ 3A	0 ~ 2.3A	0 ~ 1.9A	0 ~ 1.7A	0 ~ 1.25A	
	RATED POWER	45.6W	45W	46W	45.6W	45.9W	45W	
	RIPPLE & NOISE (max.) Note.2	2Vp-p	2.4Vp-p	1.8Vp-p	2.7Vp-p	2.7Vp-p	3.6Vp-p	
	VOLTAGE ADJ. RANGE Note.5	11.5 ~ 13V	14.5 ~ 16.2V	19.5 ~ 22V	24 ~ 26V	25 ~ 30V	32.5 ~ 39V	
	Can be adjusted by internal potentiometer SVR1							
	CURRENT ADJ. RANGE Note.5	3% ~ -25%. Can be adjusted by internal potentiometer SVR2						
	VOLTAGE TOLERANCE Note.3	±10%						
INPUT	LINE REGULATION	±3.0%						
	LOAD REGULATION	±5.0%						
	SETUP TIME	1500ms / 230VAC	3000ms / 115VAC at full load					
	VOLTAGE RANGE Note.4	90 ~ 295VAC	127 ~ 417VDC					
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	PF>0.92/115VAC, PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)						
PROTECTION	EFFICIENCY (Typ.)	83.5%	85%	86.5%	86.5%	86.5%	87.5%	
	AC CURRENT (Typ.)	0.55A/115VAC	0.25A/230VAC					
	INRUSH CURRENT (max.)	40A/230VAC						
	LEAKAGE CURRENT	<0.75mA / 240VAC						
	OVER CURRENT	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.						
ENVIRONMENT	OVER VOLTAGE	13.8 ~ 16V	17.5 ~ 21V	22.8 ~ 25V	28 ~ 32V	31 ~ 35V	41 ~ 46V	
	OVER TEMPERATURE	95°C ±10°C (TSW1) detect on heatsink of power transistor						
	WORKING TEMP.	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down						
	WORKING HUMIDITY	-30 ~ +50°C (Refer to "Derating Curve")						
SAFETY & EMC	STORAGE TEMP., HUMIDITY	20 ~ 95% RH non-condensing						
	TEMP. COEFFICIENT	-40 ~ +80°C, 10 ~ 95% RH						
	VIBRATION	±0.03%/°C (0 ~ 50°C)						
	MTBF	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes						
OTHERS	SAFETY STANDARDS	UL879, UL8750, UL1310 Class 2, TUV EN61347-1, EN61347-2-13 independent CAN/CSA C22.2 No. 223-M91(except for 48V); J61347-1, J61347-2-13, IP64 approved						
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FC:1.88KVAC O/P-FC:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH						
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥75% load) ; EN61000-3-3						
NOTE	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level, criteria A						
	MTBF	497.8Khrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	181*61.5*35mm (L*W*H)						
NOTE	PACKING	0.5Kg; 24pcs/13Kg/0.75CUFT						
	1.	All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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 characteristics for more details.						
	5.	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.						
	6.	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.						
	7.	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.						
NOTE	8.	Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.						

■ Mechanical Specification

Case No.960A Unit:mm

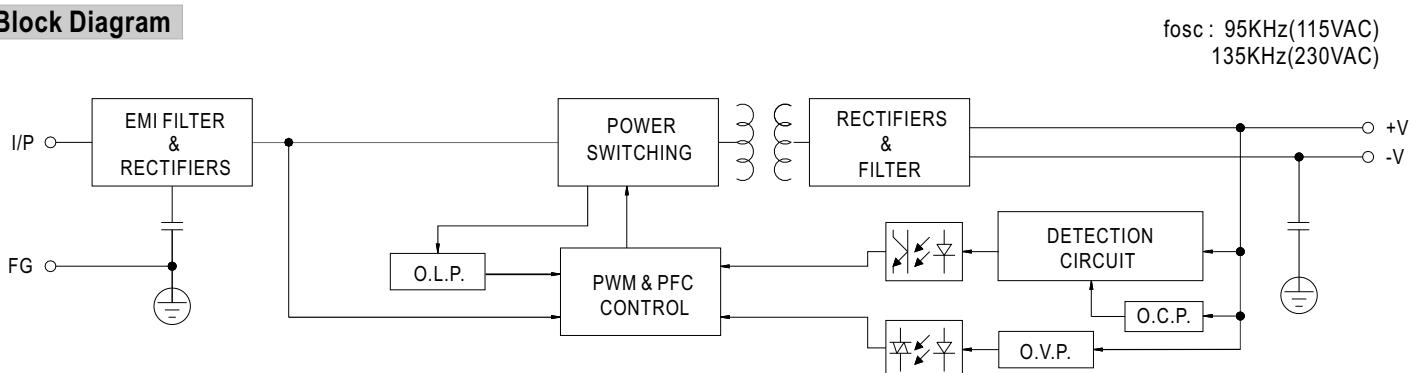


Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.

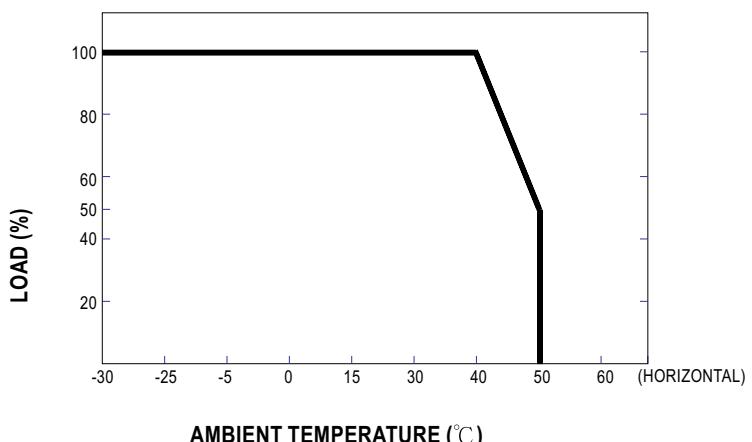


SVR1	Output voltage adjustment
SVR2	Output current adjustment

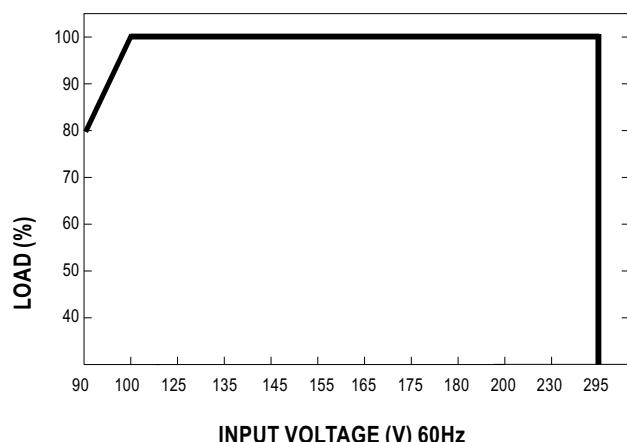
■ Block Diagram

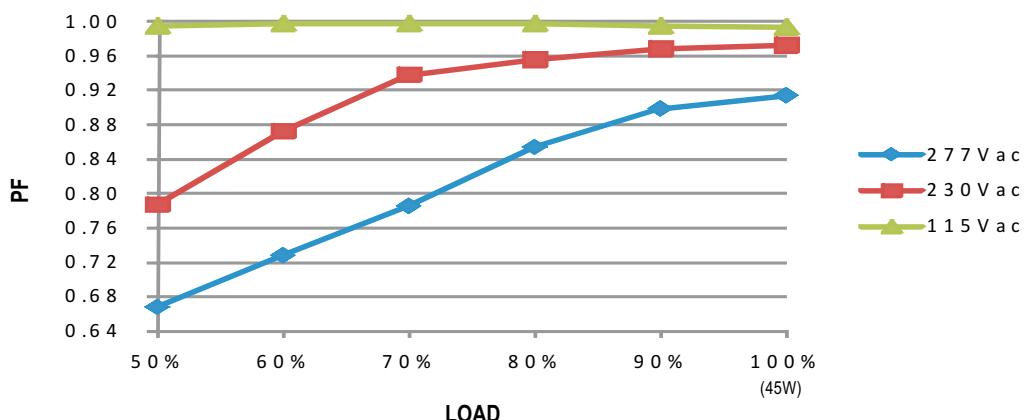


■ Derating Curve

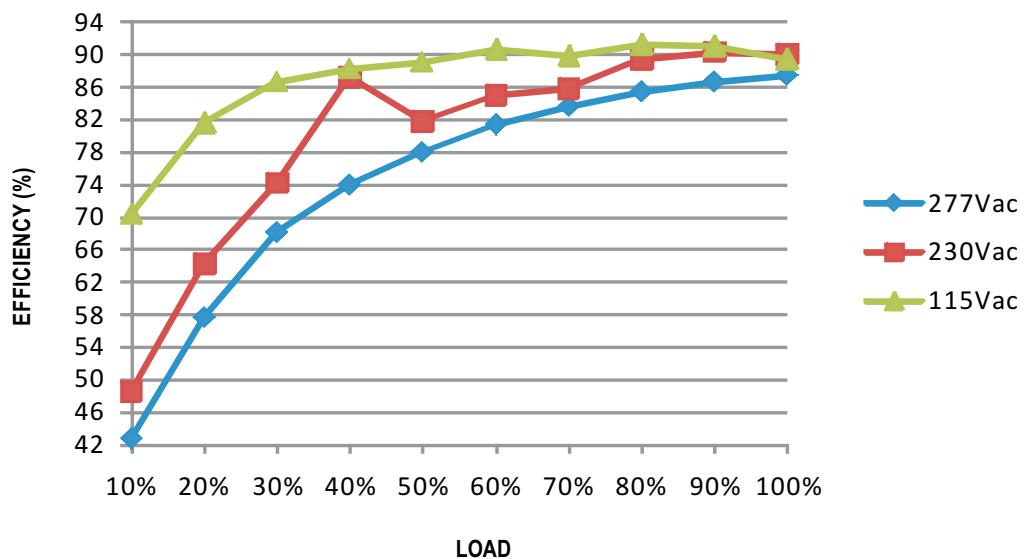


■ Static Characteristics

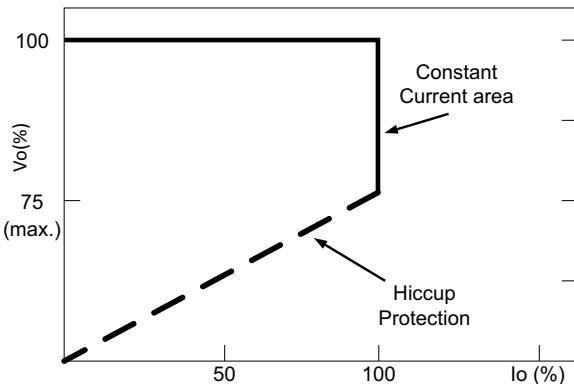


■ Power Factor Characteristic**Constant Current Mode****■ EFFICIENCY vs LOAD (48V Model)**

PLN-45 series possess superior working efficiency that up to 87.5% 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