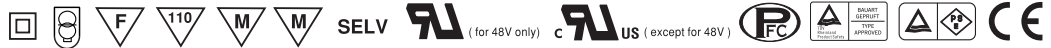


# 30W Single Output LED Power Supply

## ■ Features :

- Universal AC input / Full range
- Adjustable output voltage and current level
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Fully isolated plastic case with terminal block style of I/O
- Built-in active PFC function, comply with EN61000-3-2 class C (Pin ≥ 25W)
- Class II power unit, no FG
- 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

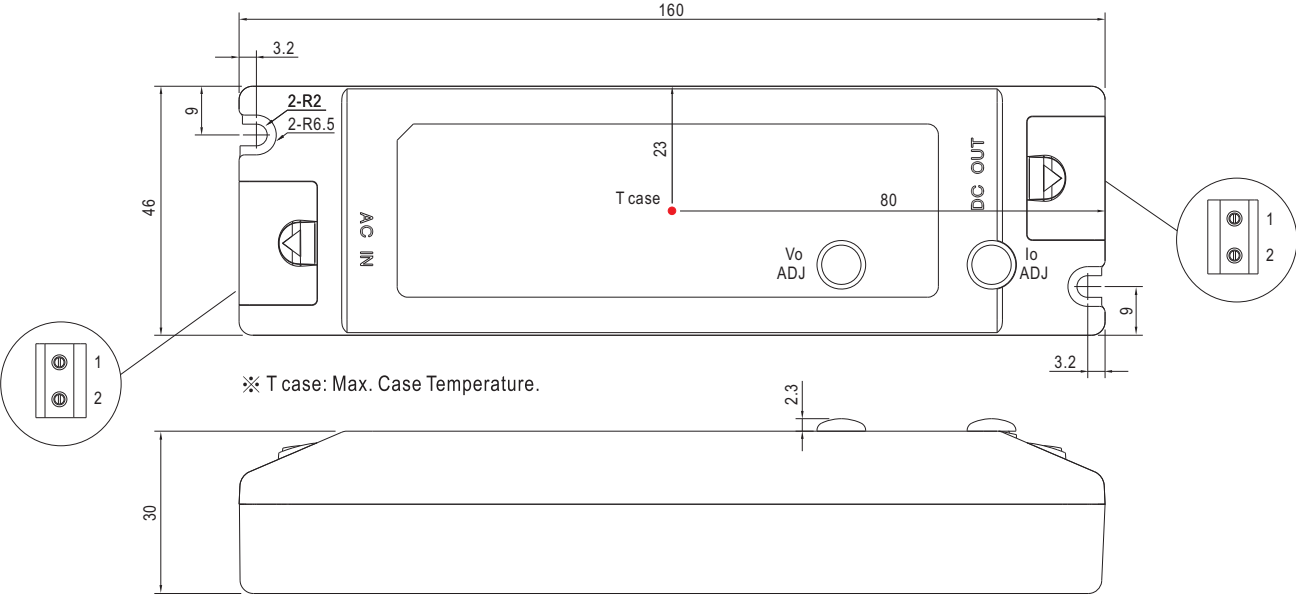


OUTPUT	<b>DC VOLTAGE</b>	9V	12V	15V	20V	<b>24V</b>	27V	36V	48V	
	<b>CONSTANT CURRENT REGION</b> Note.6	6.3 ~ 9V	8.4 ~ 12V	10.5 ~ 15V	14 ~ 20V	16.8 ~ 24V	18.9 ~ 27V	25.2 ~ 36V	33.6 ~ 48V	
	<b>RATED CURRENT</b>	3.3A	2.5A	2A	1.5A	1.25A	1.12A	0.84A	0.63A	
	<b>CURRENT RANGE</b>	0 ~ 3.3A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.5A	0 ~ 1.25A	0 ~ 1.12A	0 ~ 0.84A	0 ~ 0.63A	
	<b>RATED POWER</b>	29.7W	30W	30W	30W	30W	30.24W	30.24W	30.24W	
	<b>RIPPLE &amp; NOISE (max.)</b> Note.2	2.6Vp-p	2Vp-p	2.6Vp-p	2.6Vp-p	2.4Vp-p	2.3Vp-p	3.6Vp-p	3.7Vp-p	
	<b>VOLTAGE ADJ. RANGE</b> Note.5	8.55 ~ 9.9V	11.4 ~ 13.2V	14.5 ~ 16.5V	19 ~ 22V	22.8 ~ 26.4V	25.65 ~ 29.7V	34.2 ~ 39.6V	45.6 ~ 52.8V	
	<b>CURRENT ADJ. RANGE</b> Note.5	2.475 ~ 3.399A	1.875 ~ 2.575A	1.5 ~ 2.06A	1.125 ~ 1.545A	0.938 ~ 1.288A	0.84 ~ 1.1536A	0.63 ~ 0.865A	0.473 ~ 0.649A	
	<b>VOLTAGE TOLERANCE</b> Note.3	±10%								
	<b>LINE REGULATION</b>	±3.0%								
<b>LOAD REGULATION</b>	±5.0%									
<b>SETUP TIME</b>	2000ms / 230VAC 3000ms / 115VAC at full load									
INPUT	<b>VOLTAGE RANGE</b> Note.4	90 ~ 264VAC		127 ~ 370VDC						
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz								
	<b>POWER FACTOR (Typ.)</b>	PF>0.95/115VAC, PF>0.9/230VAC at full load (Please refer to "Power Factor Characteristic" curve)								
	<b>EFFICIENCY (Typ.)</b>	80%	82.5%	83.5%	84%	84%	84.5%	85%	85.5%	
	<b>AC CURRENT (Typ.)</b>	0.4A/115VAC		0.2A/230VAC						
	<b>INRUSH CURRENT (max.)</b>	COLD START 35A(twidth=25μs measured at 50% Ipeak) at 230VAC								
	<b>LEAKAGE CURRENT</b>	<0.5mA / 240VAC								
PROTECTION	<b>OVER CURRENT</b>	100 ~ 110%								
		Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	<b>SHORT CIRCUIT</b>	Hiccup mode, recovers automatically after fault condition is removed.								
	<b>OVER VOLTAGE</b>	10 ~ 14V	14 ~ 16V	17 ~ 22V	23 ~ 26V	27 ~ 34V	31 ~ 35V	40 ~ 50V	53 ~ 63V	
	Protection type : Shut down o/p voltage, re-power on to recover									
<b>OVER TEMPERATURE</b>	95°C ±10°C (TSW1)									
	Protection type : Shut down o/p voltage, re-power on to recover									
ENVIRONMENT	<b>WORKING TEMP.</b>	-30 ~ +50°C (Refer to "Derating Curve")								
	<b>WORKING HUMIDITY</b>	20 ~ 95% RH non-condensing								
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +80°C, 10 ~ 95% RH								
	<b>TEMP. COEFFICIENT</b>	±0.06%/°C (0 ~ 50°C)								
	<b>VIBRATION</b>	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes								
SAFETY & EMC	<b>SAFETY STANDARDS</b>	UL1310, TUV EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V), J61347-1, J61347-2-13 approved								
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3.75KVAC								
	<b>ISOLATION RESISTANCE</b>	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH								
	<b>EMC EMISSION</b>	Compliance to EN55015, EN61000-3-2 Class C (Pin ≥ 25W), Class D (>70% load) ; EN61000-3-3								
	<b>EMC IMMUNITY</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547, light industry level, criteria B								
OTHERS	<b>MTBF</b>	625.5K hrs min. MIL-HDBK-217F (25°C)								
	<b>DIMENSION</b>	160*46*30mm (L*W*H)								
	<b>PACKING</b>	0.2Kg; 70pcs/15Kg/0.96CUFT								
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μf &amp; 47μf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Derating may be needed under low input voltage. Please check the static characteristics for more details.</li> <li>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.</li> <li>6. Constant current operation region is within 70% ~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.</li> <li>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.</li> <li>8. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.</li> </ol>									

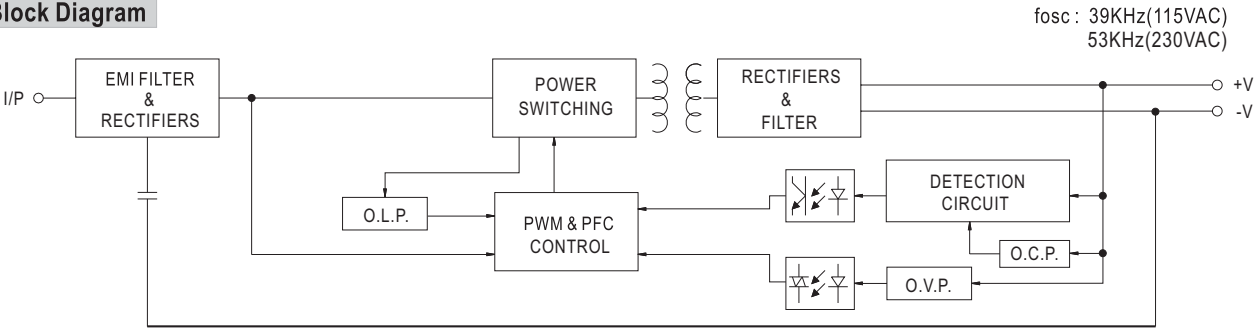
# 30W Single Output LED Power Supply

## Mechanical Specification

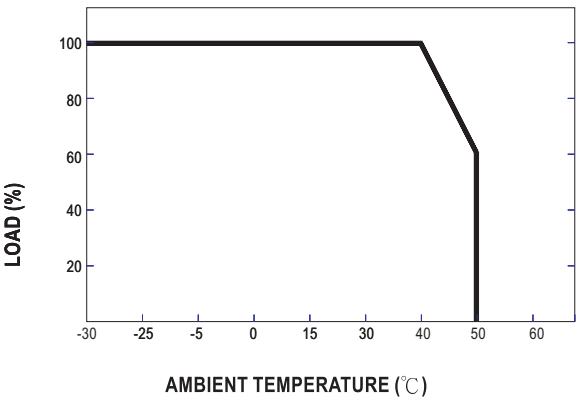
Case No. 990A Unit:mm



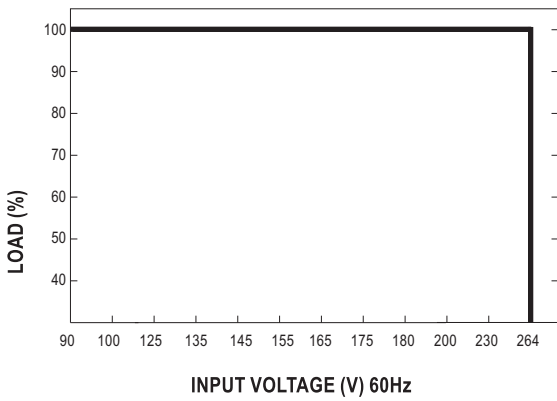
## Block Diagram



## Derating Curve



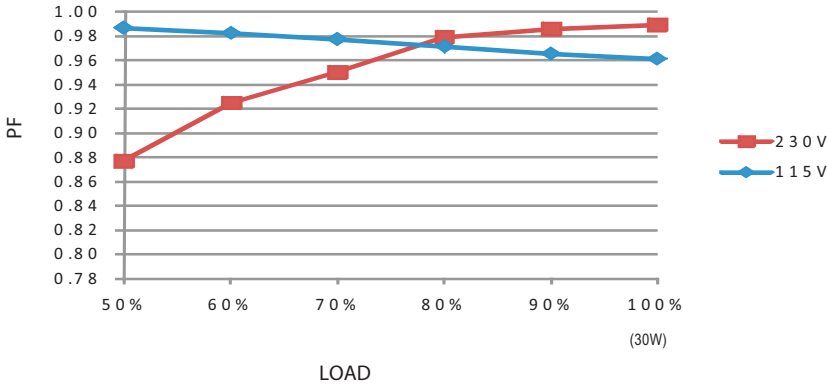
## Static Characteristics



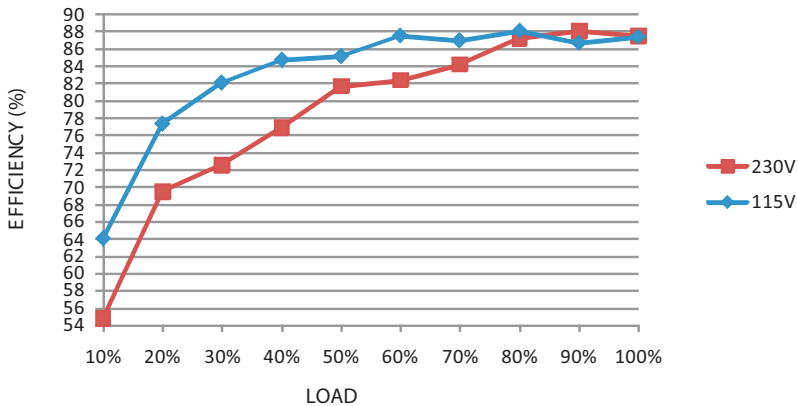
# 30W Single Output LED Power Supply

## Power Factor Characteristic

Constant Current Mode

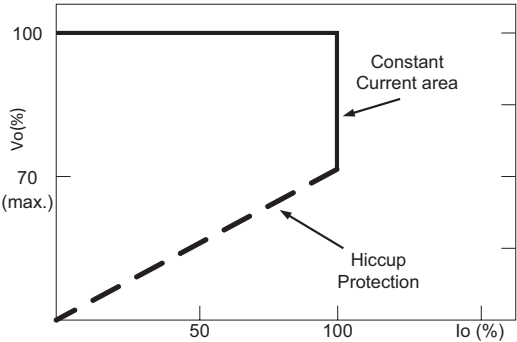


## EFFICIENCY vs LOAD (48V Model)



## 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