

S.M.P.S

LED Converter

Water Proof Converter

# F500CP2 Series

500W single output with c.c circuit and PFC function



- Constant current design
- Built-in PFC function
- Protections: Over current / Short circuit
- IP68 design for outdoor installations
- 3 in 1 dimming function(option:D type)
- Suitable for LED lighting and street lighting applications
- Safety standards : K61347-2-1, K61347-2-13,
- EMC standards : K00015, K61547
- Metal case

**UPF500S150CP2**

Blank : IP68 rated. Cable for I/O connection.  
 Output current level can be adjusted through internal potentiometer  
 D(option) : IP68 rated. Constant current level adjustable through output cable with 10V PWM signal or 1-10Vdc or resistance



ITEM		UPF500S150CP2 □	UPF500S190CP2 □	UPF500S250CP2 □
INPUT	VOLTAGE RANGE	AC180~264V		
	FREQUENCY RANGE	47~63Hz		
	POWER FACTOR	PF>0.95 at over 75% of rated power		
	EFFICIENCY(typ.)	93.5%	93.5%	93.5%
	AC CURRENT(typ.)	2.35A/220VAC (typ)		
	INRUSH CURRENT(typ.)	65A/220VAC		
	LEAKAGE CURRENT	<2.5mA / 220VAC		
OUTPUT	RATED CURRENT	3.13A	2.47A	1.88A
	CONSTANT CURRENT REGION	135-165V	160-200V	225-275V
	RATED POWER	470W	470W	470W
	CURRENT ADJ. RANGE	2.76~3.92A	2.2~2.72A	1.67~2.13A
	CURRENT ACCURACY	±5%		
	RIPPLE&NOISE(max.) Note2	1500mVp-p		
	SETUP,RISE TIME(max.)	3000ms,100ms/220VAC at full load		
PROTEC-TION	OVER CURRENT Note3	Over 95~108% of rating		
	SHORT CIRCUIT	Hiccup mode ; recovers automatically after fault condition is removed		
ISOLA-TION	WITHSTAND VOLTAGE	I/P-O/P:AC3.75KV, I/P-F.G:AC2KV, O/P-F.G:AC1.5KV		
	ISOLATION RESISTANCE	I/P-O/P, I/P-F.G, O/P-F.G:DC500V 100Mohms(At room temp. & humid.)		
ENVIRON-MENT	WORKING TEMP.&HUMID.	-35~+70℃ (Refer to "DERATING CURVE"),20~95%RH		
	STORAGE TEMP.&HUMID.	-40~+80℃,10~95%RH		
	VIBRATION	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes		
OTHERS	DIMENSION/WEIGHT	309*125.5*46.2mm(L*W*H)/2.9Kg		

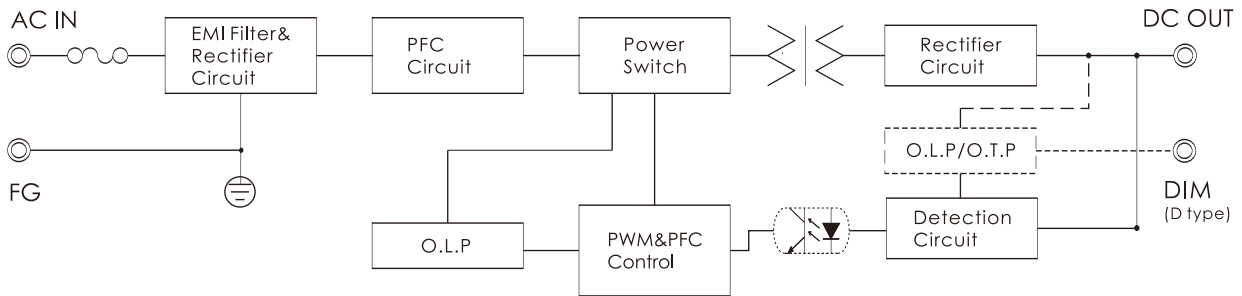
- NOTE**
1. All parameters not specially mentioned are measured at 220vac input, rated load and 25℃ of ambient temperature.
  2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with 0.1 uF & 47uF parallel capacitor.
  3. Refer to "DRIVING METHODS of LED MODULE"
  4. Turn on the AC switch after connecting the driver and the LED load

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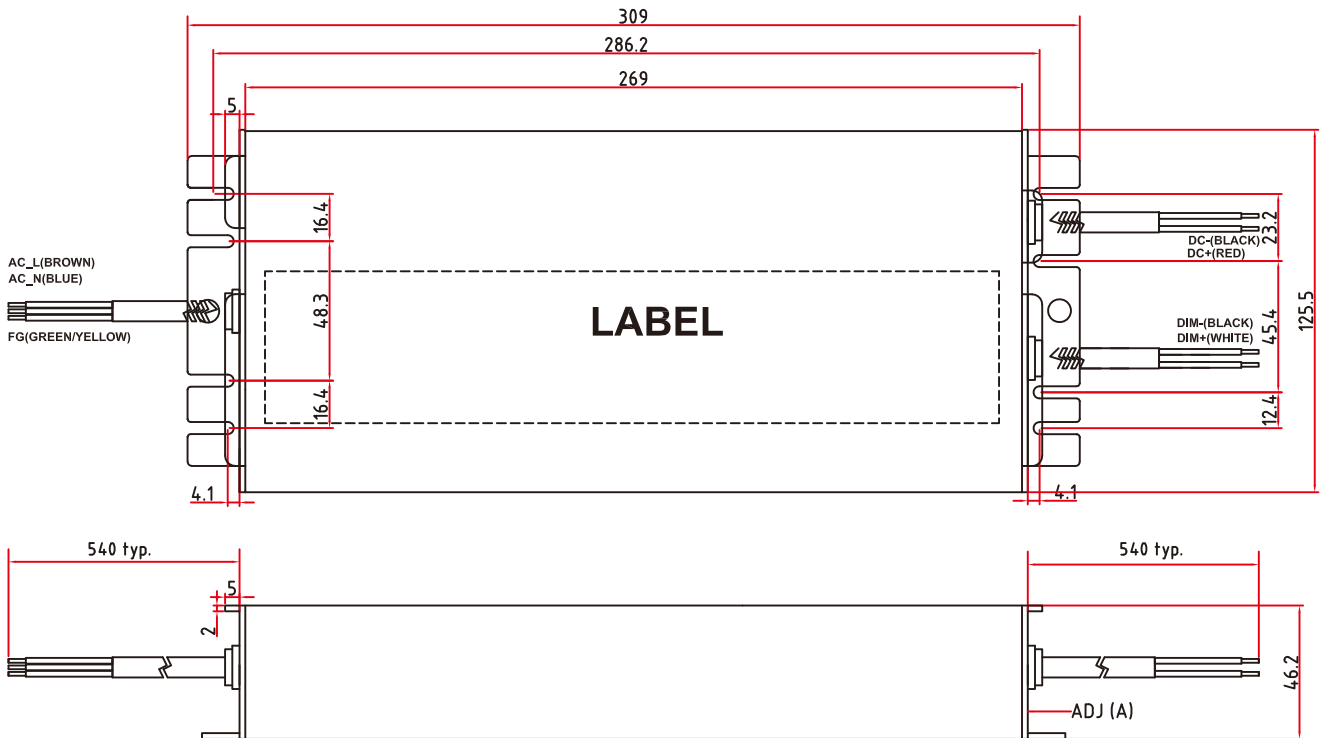
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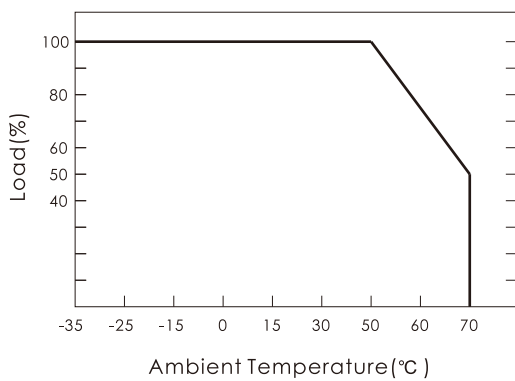
■ BLOCK DIAGRAM



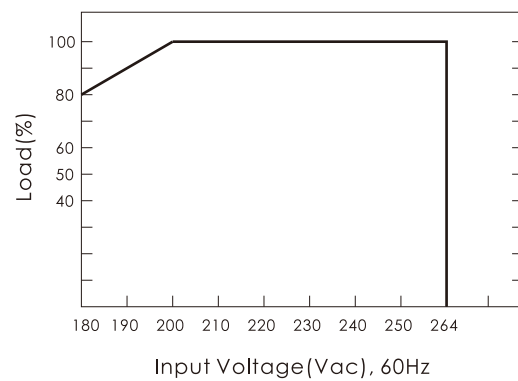
■ DIMENSIONS(unit:mm)



■ DERATING CURVE

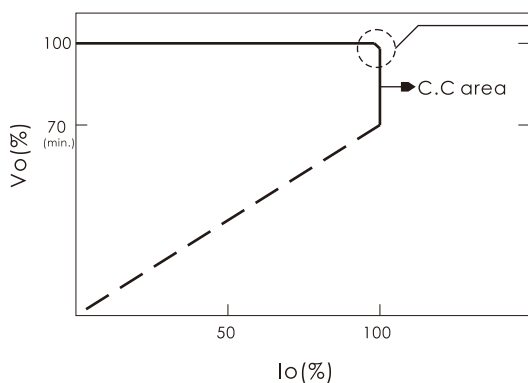


■ STATIC CHARACTERISTICS



DRIVING METHODS of LED MODULE

- This series works in constant current mode to directly drive the LEDs

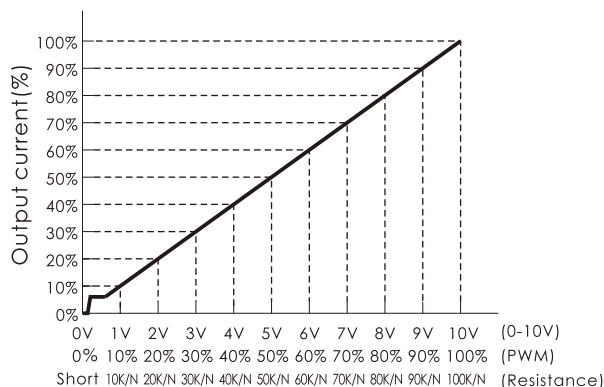


In the constant current region, the highest voltage at the output of the driver depends on the configuration of the systems.

DIMMING OPERATION(option:D type)

- Built-in 3 in 1 dimming function. Output constant current level can be adjusted through output cable by connecting 10V PWM signal or 0-10Vdc or resistance between DIM+ and DIM-.
- Please do not connect 'DIM-' to 'V-'

DIMMING CURVE



- 10V PWM signal for output current adjustment(typ.): frequency range:100Hz~3KHz

Duty Value	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	Open
Percent of Rated Current	0%	5~18%	15~28%	25~38%	35~48%	45~58%	55~68%	65~78%	75~88%	85~98%	95~108%	95~108%

- 0-10V dimming function for output current adjustment(typ.)

Dimming Value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	Open
Percent of Rated Current	0%	5~18%	15~28%	25~38%	35~48%	45~58%	55~68%	65~78%	75~88%	85~98%	95~108%	95~108%

- Reference resistance value for output current adjustment(typ.)

Resistance Value	Single driver	Short	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	Open
	Multiple driver (N=driver quantity for synchronized dimming operation)	Short	10KΩ /N	20KΩ /N	30KΩ /N	40KΩ /N	50KΩ /N	60KΩ /N	70KΩ /N	80KΩ /N	90KΩ /N	100KΩ /N	---
Percent of Rated Current		0%	5~18%	15~28%	25~38%	35~48%	45~58%	55~68%	65~78%	75~88%	85~98%	95~108%	95~108%