S.M.P.S | LED Converter | Water Proof Converter

F60CQ2 Series

60W single output with C.C circuit and PFC function

- Constant current design(12V:Constant voltage)
- Built-in PFC function
- Protections:Over current /Over voltage /Short circuit
- IP68 design for outdoor installations
- 100% full load burn-in test
- 3 in 1 dimming function(option:D type)
- Suitable for LED lighting and street lighting applications
- Safety standards : K61347-2-1,K61347-2-13, EN61347-1,EN61347-2-13
- EMC standards : K00015,K61547,K61000-3-2,3,EN55015
- Metal case

UPF60S48CQ2□

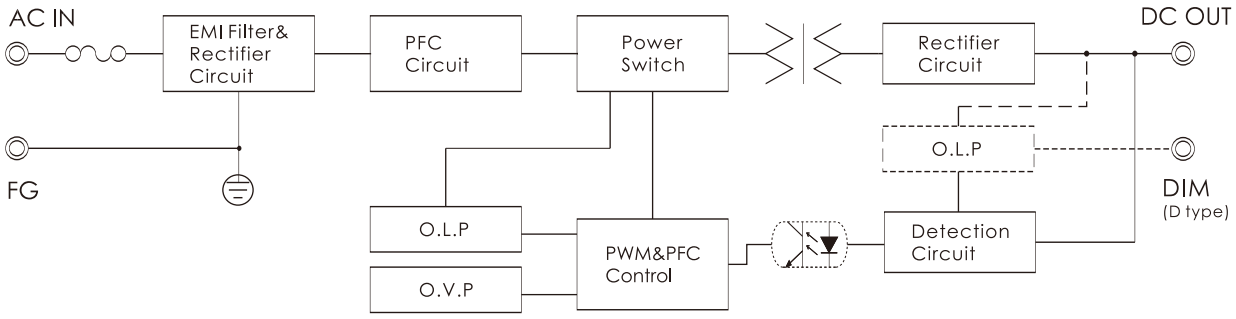
Blank : IP68 rated. Cable for I/O connection.
Output current level can be adjusted through internal potentiometer

D(option) : IP68 rated. Constant current level adjustable through output cable with 0-10Vdc or 10V PWM signal or resistance

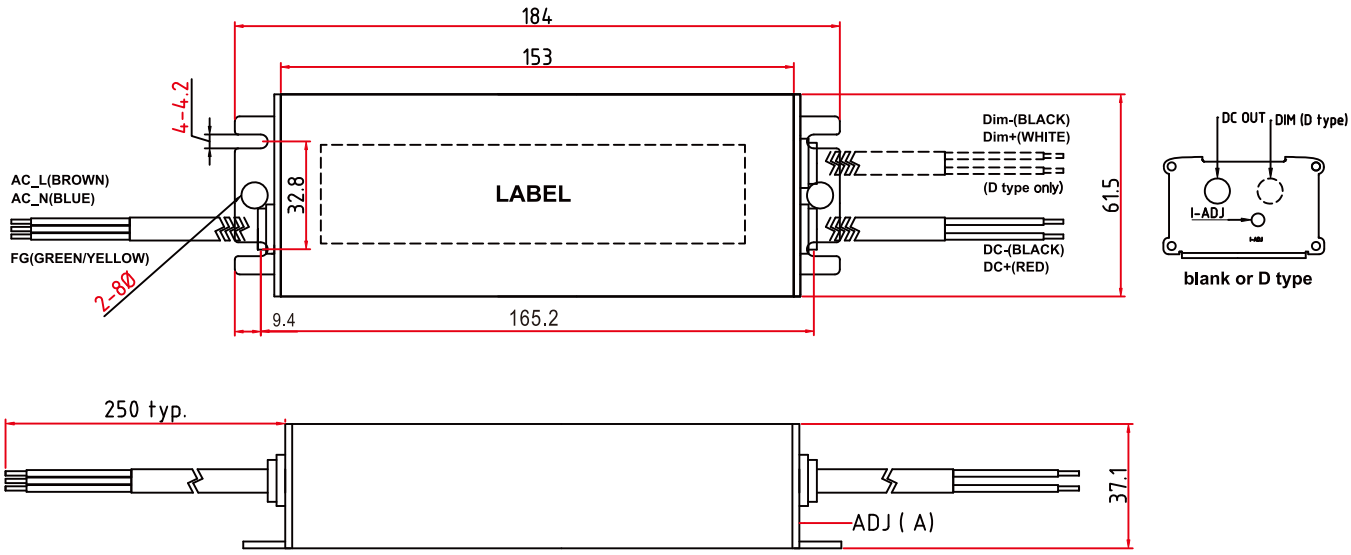
IP68 SELV LPS

ITEM		UPF60S12CQ2	UPF60S36CQ2□	UPF60S48CQ2□
INPUT	VOLTAGE RANGE	AC90~305V(refer to static characteristics)		
	FREQUENCY RANGE	47~63Hz		
	POWER FACTOR	PF>0.95 at over 60% of rated power		
	EFFICIENCY(typ.)	84%	87%	88%
	AC CURRENT(typ.)	0.32A/230VAC		
	INRUSH CURRENT(typ.)	40A/230VAC		
	LEAKAGE CURRENT	<2.5mA / 230VAC		
OUTPUT	RATED CURRENT	5A	1.7A	1.25A
	CONSTANT CURRENT REGION	–	21.6-36V	28.8-48V
	RATED POWER	45W at 100-160VAC , 60W at 160-305VAC		
	CURRENT ADJ. RANGE	–	1~1.7A	0.75~1.25A
	CURRENT ACCURACY	±5%		
	RIPPLE&NOISE(max.) Note2	150mVp-p		
	SETUP,RISE TIME(max.)	3000ms,100ms/230VAC at full load		
	HOLD UP TIME(typ.)	50ms/230VAC at full load		
PROTEC -TION	OVER CURRENT Note3	12V : Over 110% of rating ; recovers automatically after fault condition is removed 24,36,48V : 95~108%		
	SHORT CIRCUIT	Hiccup mode ; recovers automatically after fault condition is removed		
	OVER VOLTAGE	110~140% of rating		
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.	-40~+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	184*61.5*37.1mm(L*W*H)/0.64Kg		
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 pare-wire terminated with 0.1 uF & 47uF parallel capacitor. 3. Refer to "DRIVING METHODS of LED MODULE"			

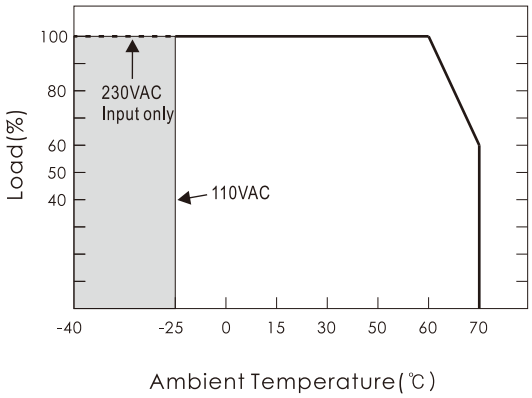
■ BLOCK DIAGRAM



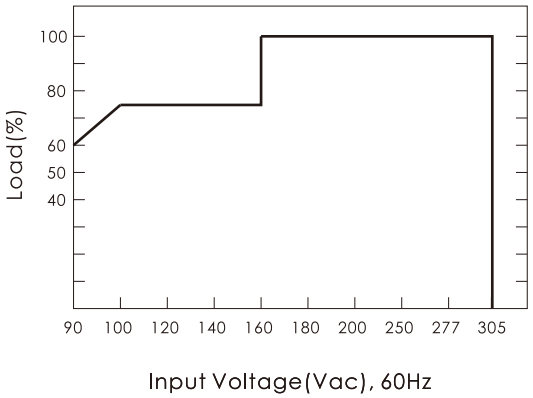
■ DIMENSIONS(unit:mm)



■ DERATING CURVE

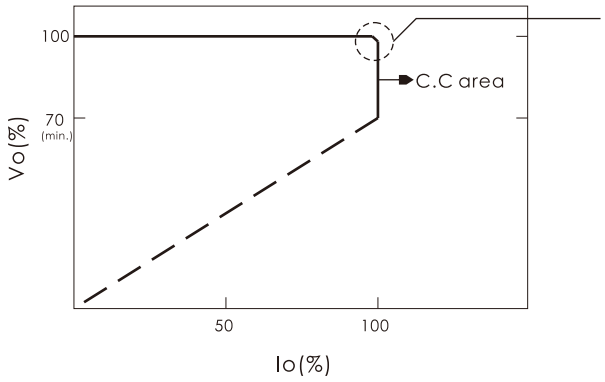


■ STATIC CHARACTERISTICS



■ DRIVING METHODS of LED MODULE

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



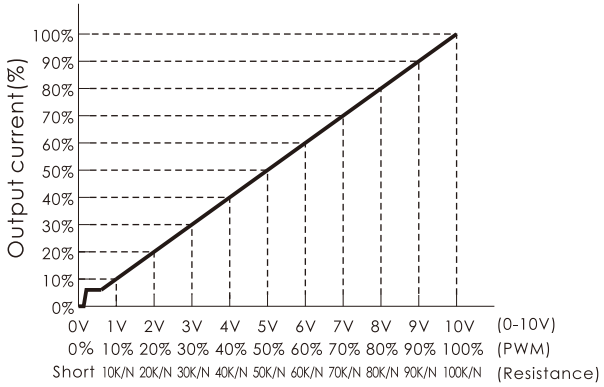
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the systems.

■ 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%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	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%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	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%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~108%